

FOR SEQUENCE LISTING

SEQ ID NO: 1

FHOS AA1-150

5 MAGGEDRGDGEPVSVVTVRVQYLEDTPFACANFPEPRRAPTCSLDGALPLG
AQIPAVHRLLGAPLKLEDCALQVSPSGYYLDTELSLEEQREMLEGFYEEISKG
RKPTLILRTQLSVRVNAILEKLYSSSGPELRRSLFSLKQIFQEDK

10 **SEQ ID NO: 2** **FHOS (1-250 AA)**

MAGGEDRGDGEPVSVVTVRVQYLEDTPFACANFPEPRRAPTCSLDGALPLG
AQIPAVHRLLGAPLKLEDCALQVSPSGYYLDTELSLEEQREMLEGFYEEISKG
15 RKPTLILRTQLSVRVNAILEKLYSSSGPELRRSLFSLKQIFQEDKDLVPEFVHSE
GLSCLIRVGAAADHNYQSYILRALGQLMLFVDGMLGVVAHSDTIQWLYTLC
ASLSRLVVKTALKLLLVFVEYSENNAPLFIRAVNSVATT

20 **SEQ ID NO: 3** **FHOS (1-348 AA)**

MAGGEDRGDGEPVSVVTVRVQYLEDTPFACANFPEPRRAPTCSLDGALPLG
AQIPAVHRLLGAPLKLEDCALQVSPSGYYLDTELSLEEQREMLEGFYEEISKGR
KPTLILRTQLSVRVNAILEKLYSSSGPELRRSLFSLKQIFQEDKDLVPEFVHSEG
25 LSCLIRVGAAADHNYQSYILRALGQLMLFVDGMLGVVAHSDTIQWLYTLCAS
LSRLVVKTALKLLLVFVEYSENNAPLFIRAVNSVATTTGAPPWANLVSILEEKN
GADPELLVYTVTLINKTLAALPDQDSFYDVTDALEQQGMDTLVQRHLGTAGT
DVDLRTQLVLYENALKLEDGDIEEAPGAG

30 **SEQ ID NO: 4** **mRNF23 (101-234)**

IRDESLCSQHHEPLSLFCYEDQEAVCLICAISHTRPHTVVPMDDATQEYKEKL
QKCLEPLEQKLQEITCCKASEEKKPGELKRLVESRRQILKEFEELHRLDEEQ
35 QTLLSRLEEEEQDILQRLRENAHLG

SEQ ID NO: 5 **mERp59 (J05185.1) 23-325**

40 EEEDNVVLKKS NFEEALAAHKYLLVEFYAPWCGHCKALAPEYAKAAAKLK
AEGSEIRLAKVDATEESDLAQYGVRGYPTIKFFKNGDTASPKEYTAGREADD
IVNWLKKRTGPAATTLSDTAAAESLVDSSSEVTIGFFKDVEDSAKQFLAAE
AIDDIPFGITSNSGVFSKYQLDKDGVVLFKKFDEGRNNFEGEITKEKLLDFIKH
NQLPLVIEFTEQTAPKIFGGEIKTHILLFLPRSVSDYDGKLSSFKRAAEGFKGI
45 LFIFINS DHTDNQRILEFFGLKKEECPAVRLITLLEE

SEQ ID NO: 6 **mBRD7(621) (NA)**

5 GHDSSEFEDRSDHDKHKDRKRKKRKKGEKQAPGEEKGRKRRRVKEDKKKR
DRDRAENEVDRDLQCHVPIRLDLPPEKPLTSSLAKQEEVEQTPLQEALNQLMR
QLQSTMKEKIKNNDYQSIEELKDNFKLMCTNAMIYNKPETIYYKAAKKLLHS
GMKILSQERISLQKSIDFMSDLQKTRKQKERTDACQSGEDSGCWQREREDS
GDAETQAFRSPAKDNKRKDRDVLEDKWRSSNSEREHEQIERVVQESGGKLTR
RLANSQCEFE

SEQ ID NO: 7
mSPNA1 45-677

10 NDWAALLELWDKCQHQRQCLDFHLYRDSQVDSWMSGQEAFLNEDLG
NSVGSVEALLQKHDDFEEAFTAQEEKIITLDETATKLIDNDHYDSENIAAIRDG
LLARRDALRERAATRRKLLVDSQLLQQLYQDSDDLKTWINKKKKLADDDY
KDVQNLKSRVQKQDFEELAVNEIMLNNLEKTGQEMIEDGHYASEAVAARL
15 SEVANLWKELLVATAHK

SEQ ID NO: 8
MVCP 478-797

20 DIGGLEDVKRELQELVQYPVEHPDKFLKFGMTPSKGVLFYGPFGCGKTLLAK
AIANECQANFISIKGPELLTMWFGSEANVREIFDKARQAAPCVLFFDELDSIA
KARGGNIGDGGGAADRVINQILTEMDGMSTKKNVFIIGATNRPDIIDPAILRPG
RLDQLIYIPLPDEKSRVAILKANLQKSPVAKDVDFLEFLAKMTNGFSGADLTEIC
25 QRACKLAIRESEIRRRERERTNPSAMEVEEDDPVPEIRRDHFEEAMRFARR
SVSDNDIRKYEMFAQTLQQSRGFGSFRFSGNQGGAGPSQGSGGGTGGSVYT

SEQ ID NO: 9
mSTAT5A 32-319

30 HYLAQWIESQPWGAIDLDPQDRGQATQLLEGLVQELQKKAHQVGEDGFL
LKIKLGHYATQLQNTYDRCPMELVRCIRHILYNEQRLVREANNCSSPAGVLVD
AMSQKHLQINQRFEELRLITQDTENELKKLQQTQEYFIIQYQESLRIQAQFAQL
GQLNPQERMSRETALQQKQVSLETWLQREAQTLQQYRVELAEKHQKTLQLL
35 RKQQTILDELQWKRRQQLAGNGGPPGSLDLVLSWCEKLAELIHWQNRQQI
RRAEHLCCQLPIPGPVEEMLAEVNAT

SEQ ID NO: 10
Figure 8- Partial Amino Acid Sequence (mTAKEDA009, AA 1-116)

40 AIVERRANLLRAEIEELRATLEQTERSARKIAEQELLDASERVQLLHTQNTSLINT
KKKLENDVSQLQSEVEEVIQESRNAEEKAKKAITDAAMMAEELKKEQD TSA
HLERMKKNME

SEQ ID NO: 11
mPTRF 25-130

50 EPTQGEARATEEPSGTDSDELIKSDQVNGVLVLSLLDKIIGAVDQIQLTQAQLE
ERQAEMEGAVQSIQGELSKLGKAHATTSNTVSKLLEKVRKVS NVKTVRGSL

SEQ ID NO: 12
mAK031693 72-360

5 QYKTKCESQSGFILHLRQLLSRGNTKFEALTVVVIQHLLSEREEALKQHKTLSQ
ELVSLRGELVAASSACEKLEKARADLQTAYQEFVQKLDQQHQTDRTLENRL
KDLYTAECEKLQSIYIEEAKEYKTQLQEFDNLNAAHETTKLEIEASHSEKVEL
LKKTYETSLSEIKKSHMEKKSLEDLLNEKQESLEKQINDLKSENDALNERLK
10 SEEQKQLSREKANSKNPQVMYLEQELESLEKAVLEIKNEKLHQQDMKLMKME
KLVDNNTALVDKLRFFQGENEELNAR

SEQ ID NO: 13
m1200014P03Rik 253-546

15 ATMLNILALVYRDQNKYKEAAHLLNDALSIRESTLGRDHPAVAATLNNLAVLY
GKRGKYKEAEPLCQRALEIREKVLGTDHPDVAQQLNNLALLCQNQGKYEAV
ERYYYQALAIYESQLGPDNPNVARTKNNLASCYLKQGKYSEAEALYKEILTCA
HVQEFGSVDDDDHKPIWMHAEEREEMSRSRPRDSSAPYAEGGWYKACRVSS
PTVNTTLKNLGAPYRRQGKLEAAETLEECALRSRKQGTDPISQTKVAELLGEG
20 DGRKAIQEGPGDSVKFEGGEDASVAVEWSGDGS

SEQ ID NO: 14
mNNP1 41-391

25 QRATGGFTPDELLKVWKGIFYCMWMQDKPLQQEELGRTIAQLVHAFHTTEA
QHQLKAFWQTMIREWVGIDRLRLDKFYMLMRMVLSESLKAVKARGWDER
QIEQLLELLTTEILNPDSQAPSGVKSHFLEIFLEELAKVGAAELTADQNLQFIDP
FCQIAARTKDSQVLHKIIQSIFQTIVEQAPLAIEDIMNELDTQSgegeASDGGDG
EASDGGDGEASDDDDGEASDGGDGDVADSDDSDGADDDDDGDVSDGGDGD
30 NDEGDSNKSSEGEQDLQDTPPKKLPAAGTAHRAGPEADKEQAWDDEENAGPV
LQFDYEALANRLFKLASRQSTPSQNRKRLYKVIQKLRELA

SEQ ID NO: 15
Figure 13- Partial Amino Acid Sequence (mLOC213473(195))

35 RRVKDDAAAHIASLKASHEREIEKLLCQNAIENSSSKVAELNRKIATQEVLLKH
FQGQVNELQGKQESLAVSQVREEILKQITKLLEELKEAKENHTPEMKHFMG
LERKIKQMEMRHRQREQELQQIIQQTRQVVETEQNKEVEKWKRLAQLKNRE
LDKFRTELDSDLDVLRHLRQGVVVPMALAGEENTAEF

SEQ ID NO: 16
mGOLGA3 820-1019

45 QFINELKATKKRLDSEMKELRQELIKLQGEKKTVEVEHSRLQKDMSLVHQQM
AELEGHLQSVQKERDEMEIHLQSLKFDKEQMIALTEANETLKKQIEELQQEAK
KAITEQKQKMKRLGSDLTSAQKEMKTKHKAYENAVSILGRRLQEALASKEAT
DAELNQLRAQSTGGSSDPVLHEKIRALEVELQNVGQSKIPREK

50

SEQ ID NO: 17
mMYG1-pending 49-368

5 HNGTFHCDEALACALLRLLPEYANAEIVRTRDPEKLASCDIVVDVGGEYNPQS
HRYDHHQRTFTETMSSSLCPGKPWQTKLSSAGLVYLHFGRKLLAQLLGTSEED
SVVDTIYDKMYENFVEEVDVDNGISQWAEGEPRYAMTTTLSARVARLNPTW
NQPNDTEAGFRRAMDVLVQEEFLQRLNFYQHSWLPARALVEEALAQRFKVD
SSGEIVELAKGGCPWKEHLYHLESELSPKVAITFVIYTDQAGQWRVQCVKPEP
10 HSFQSRLPLPEPWRLDKALDQVSGIPGCIFVHASGFIGGHHTREGALNMAR
ATLAQR

SEQ ID NO: 18
mAK044679(668) 1-243

15 MSSQSMKLPPSNSALPNQALGSIAGLTQNLNSVRQNGNPNMFGVGNTAAQP
RGMQQPPAQLSSSQPNLRAQVPPPLLSPQVPVSLLKYAPNNGGLNPLFGPQQ
VAMLNQLSQLNQLSQISQLQRLLAQQQRAQSQRSAPSANRQQQDQQGRPLSV
QQQMMQQSRQLDPSLLVKQQTTPSQQLHQPAMKSFLDNVMPHTTPELQKG
20 PSPVNAFSNFPIGLNSNLNVNMDMNSIKEPQSRLR

SEQ ID NO: 19
RS21C6 69-170

25 ELFQWKTDGEPGPQGWSRERAALQEELSDVLIYLVALAARCRVDLPLAVLS
KMDINRRRYPAHLARSSSRKYTELPHGAISEDQAVGPADIPCDSTGQTST

SEQ ID NO: 20
KIAA0562 264-635

30 EDYDLAKEKKQQMEQYRAEVYEQLELHSLDDAELMRRPFDLPLQPLA
RSGSPCHQKPMPSLPQLEERGTHENQFAEPFLQEKPSYSLTISPQHSV
DPLLPATDHPKINAESLPYDERPLPAIRKHGEAVVEPEMSNADISDA
RRGGMGEPEPLTEKALREASSAIDVLGETLIAEAYCKTWSYREDALLA
35 LSKKLMEMPVGTPKEDLKNTLRASVFLVRRRAIKDIVTSVVFQASLKKL
MITQYIPKHKLSKLETAHCVERTIPVLLTRTGDSSARLRVTAANFIQEM
ALFKEVKSLQIIPSYLVQPLKANSSVHLAMSQMGLLARLLKDLGTGSSG
FTIDNVMKFSVSALEHRVYEVRETAVRIILD

40 **SEQ ID NO: 21**
COPB 306-868

IELKEHPAHERVLQDLVMDILRVLSTPDLEVRKKTLLQALDLVSSRNVEELVIV
LKKEVIKTNNVSEHEDTDKYRQLLVRTLHSCSVRFPDMAANVIPVLMEFLSD
45 NNEAAAADVLEFVREAIQRFDNLRMLIVEKMLEVFHAIKSVKIYRGALWILGE
YCSTKEDIQSVMTIIRSLGEIPIVESEIKKEAGELKPEEEITVGPVQKLVTMG
TYATQSALSSSRPTKKEEDRPPLRGFLLDGDFVAAASLATTLTKIALRYVALVQE
KKKQNSFVAEAMLLMATILHLGKSSLPKKPITDDDVDRLSLCLKVLSECSPLM
NDIFNKECRQSLSHMLSAKLEEEKLSQKKESEKRNVTVPDDPISFIQLTAKNE

MNCKEDQFQLSLLAAMGNTQRKEAADPLASKLNKVTQLTGFSDPVYAEAYV
HVNQYDIVLDVLVVNQTSDTLQNCTLELATLGDLKLVEKPSPLTLAPHDFANI
KANVKVASTENGIIFGNIVYDVSGAASDRNCVVLSDIHIDIMDYIQPATCTDAE
FRQMWAEFEWENKVTVNTNMVDLNDYLQH

5

SEQ ID NO: 22
MYH7 1250-1619

RTLEDQMNEHRGKAEETQRSVNDLTSQRAKLQTENGELSRQLDEKEA
10 LISQLTRGKLTYYTQQLEDLKRQLEEEVKAKNALAHALQSARHDCDLLR
EQYEEETEAKAELQRVLSKANSEVAQWRTKYETDAIQRTEELEEAKKK
LAQRLQEPEEAVEAVNAKCSSLEKTKHRVPNEIEDLMVDVERSNAAAA
ALDKKQRNFDKILAEWKQKYEESQSELESSQKEARSLSTELFKLKNAY
EESLEHLETFKRENKNLQEEISDLTEQLGSSGKTIHELEKVRKQLEAE
15 KMELQSALEEAASLEHEEGKILRAQLEFNQIKAEIERKLAEKDEEME
QAKRNHLRVVDSLQTSLDAETRSRNEALRVKKKME

SEQ ID NO: 23
MYH7 820-1038

20

ALMGVKNWPWMKLYFKIKPLLKSAEREKEMASMKEEFTRLKEALEK
SEARRKELEEKMVSLLEKNDLQLQVQAEQDNLADAEERCDQLIKNK
IQLEAKVKEMNERLEDEEEMNAELTAKKRKLEDECSELKRDIDDLELT
LAKVEKEKHATENKVKNLTEEMAGLDEIIAKLTKEKKALQEAHQAL
25 DDLQAEEDKVNTLTAKVKLEQQVDDLEGL

SEQ ID NO: 24
KIAA1633 243-406

30 DSINNLAELNKFALRKQLEQDVLSYQNLRKTLLEEQISEIRRRREEESF
SLYSDQTSYLSICLEENNRFQVEHFSQEELKKKVSDLIQLVKELYTDNQ
HLKKTIFDLSCMGFQGNQFPDRLASTEQTELLASKEDEDTIKIGEDDEI
NFLSDQHLQQSNEIMKD

35 **SEQ ID NO: 25**
KIAA1288(1191) 652-1078

EKQELKQEIMNETFEYGSLFLGSASKTTTTSGRNISKPDSCGLRQIAAP
KAKVGPPVSCLRNRNSDNRNPSADRAVSPQRIRRVSSSAGNAAVIKYEEK
40 PPKPAFQNGSSGSFYLKPLVSRHVHLMKTPPKGPSRKNLFTALNAVE
KSKQKNPRSLCIQPQTAPDALPPEKTLELTPYKTKCENQSGFILQLKQL
LACGNTKFEALTVVIQHLLSEREEALKQHKTLSQLVNLRGELVTASTT
REKLEKARNELQTVYEAQVQHQAEKTERENRLKEFYTREYEKLRDT
YIEEAEKYKMQLQEFGNLNAAHETFKLEIEASHSEKLELLKKAYEAS
45 LSEIKKGHEIEKKSLEDLLSEKQESLEKQINDLKSENDALNEKLKSEE
QKRRAREKANLKNPQIMYLEQELESKAVLEIKNEKLHQQ

SEQ ID NO: 26

mVCL 29-475

5 EGEVDGKAIPDLTAPVAAMQAAVSNLVWVGKETVQTTEDQILKRDMPPAFIK
VENACTKLVQAAQMLQSDPYSPARDYLIDGSRGILSGTSDLLTFDEAEVRK
IIRVCKGILEYLTVAEVVETMEDLVITYTKNLGPGMTKMAKMIDERQQELTHQE
HRVMLVNSMNTVKELLPVLISAMKIFVTSKNSKNQGIEEALKNRNFTVEKMS
AEINEIIRVLQLTSWDEDAWASKDTEAMKRALASIDSKLNQAKGWL RDPNAS
10 PGDAGEQAIRQILDEAGKVGELCAGKERREILGTCKMLGQMTDQVAGLRAR
GQGASPVAMQKAQQVSQGLDVLTAKVENAARKLEAMTNSKQSI AKKI
DAAQNWLA DPNGGPEGEEQIRGALAEARKIAELCDDPKVRDDILRSLG
EIAALTSKLGDLRRQGKGDSPEARALAKQVATALQNLQT

15 **SEQ ID NO: 27**

FOS – FULL LENGTH AMINO ACID SEQUENCE, FIGURE 1

MAGGEDRGDGEPVSVVTVRVQYLEDTPFACANFPEPRRAPTCSLDGALPLG
AQIPAVHRLLGAPLKLEDCALQVSPSGYYLDTELSLEEQREMLEGFYEEISKGR
20 KPTLILRTQLSVRVNAILEKLYSSSGPELRRSLFSLKQIFQEDKDLVPEFVHSEG
LSCLRVGAAADHNYQSYILRALGQLMLFVDGMLGVVAHS DTIQWLYTLCAS
LSRLVVKTALKLLLVFVEYSENNAPLFIRAVNSVATTTGAPPWANLV SILEEKN
GADPELLVYTVTLINKTLAALPDQDSFYDVTDALEQQGMDTLVQRHLGTAGT
DVDLRTQLVLYENALKLEDGDIEEAPGAGGRRERRKPSSEEGKRSRRSLEGGG
25 CPARAPEPGPTGPASPVGPTSSTGPALLTG PASSPVGPSSGLQASVNLFP TISVAP
SADTSSERSIYKARFLENVAAAETEKQVALAQGRAETLAGAMPNEAGGHPDA
RQLWDS PETAPAARTPQSPAPCVLLRAQRSLAPEPKEPLIPASPKAEPIWELPTR
APRLSIGDLDFSDLGEDEDQDMLNVESVEAGKDIPAPSPPLPLLSGVPPPPPLPP
PPPIKGFPPPPPLPLAAPLPHSVDPSSALPTKRKTVKLFWRDVKLAGGHGVSA
30 SRFGPCATLWASLDPVSVDTARLEHLFESRAKEVLPSKKAGEGRRTMTTVLDP
KRTNAINIGLTTLPPVHVIKAALLNFDEFVSKDGIEKLLTMMPTEEERQKIEG
AQLANPDIPLGPAENFLMTLASIGGLAARLQLWAFKLDYDSMEREIAEPLFDL
KVGMEQLVQNATFRCILATLLAVGNFLNGSQSSGFELSYLEKVSDVKD TVRRQ
SLLHHLCSLVLQTRPESSDLYSEIPALTRCAKVDFEQLTENLGQLERRSRAAEES
35 LRSLAKHELAPALRARLTHFLDQCARRVAMLRIVHRRVCNRFHAFLLYLG YTP
QAAREVRIMQFCHTLREFALEYRTCRRVLQQQQKQATYRERNKTRGRMITE
TEKFSGVAGEAPSNPSVPVAVSSGPGRGDADSHASMKSLT SRLED TTHNRRS
RGMVQSSSPIMPTVGPSTASPEEPPGSSLPSDTSDEIMDLLVQSVTKSSPRALAA
RERKRSRGNRKSLRRTLKSGLGDDL VQALGLSKGPGLEV

40

SEQ ID NO: 28

Full-length Amino Acid Sequence (mRNF23)

MAETSLLEAGASAASTAAALENLQVEASCSVCLEYLKEPVIIECGHNFC KACI
45 TRWWEDLERDFPCPVCRKTSRYRSLRPNRQLGSMVEIAKQLQTVKRKIRDES
LCSQHHEPLSLFCYEDQEAVCLICAISHTRPHTVVPMD DATQEYKEKLQKCL
EPLEQKLQEITCCKASEEKKPGELKRLVESRRQQILKEFEELHRRLD EEQQTLL
SRLEEEEQDILQRLRENA AHLGDRRRDLAHLAAEVEGKCLQSGFEMLKDVKS
TLEKCEKVKTMEVTSVSIELEKNFSNFPRQYFALRKILKQLIADVTLD PETAHP
50 NLVLS EDRKSVK FVETRLRDLDPDTPQRFTFYPCVLATEGFTSGRHYWEVEVG

DKTHWAVGVC RDSVSRKGELTPLPETGYWRVRLWNGDKYAATTTPTPLHIK
VKPKRVGIFLDYEAGTLSFYNVTD RSHIYTFDTFTTEKLWPLFYPGIRAGRKN
AAPLTIRPPTDWE

5 **SEQ ID NO: 29**

Figure 3- Full-length Amino Acid Sequence (mERp59)

MLSRALLCLALAWAARVGADALEEEDNVLVLKKS NFEEALAAHKYLLVEFY
APWCGHCKALAPEYAKAAAKLKAEGSEIRLAKVDATEESDLAQQYGVRGYP
10 TIKFFKNGDTASPKKEYTAGREADDIVNWLKKRTGPAATTLSDTAAAESLVDSS
EVTVIGFFKDVESDSAQQLLAAEAIDDIPFGITSNSGVFSKYQLDKDGVVLFK
KFDEGRNNFEGEITKEKLLDFIKHNQLPLVIEFTEQTAPKIFGGEIKTHILLFLPK
SVSDYDGLSSFKRAAEGFKGKILFIFIDSDHTDNQRILEFFGLKKEECPAVRLI
TLEEEMTKYKPESDELTAEKITEFCHRFLEGKIKPHLMSQEV PEDWDKQPVKV
15 LVGANFEEVAFDEKKNVVFYFAPWCGHCKQLAPIWDKLGETYKDHENIIIAK
MDSTANEVEAVKVHSFPTLKFFPASADRTVIDYNGERTLDGFKKFLESGGQDG
AGDDEDLDLEEALEPDMEEEDDDQAVKDEL

SEQ ID NO: 30

20 **Figure 4- Full-length Amino Acid Sequence (mBRD7(621))**

MGKKHKKHKS DRHFYEEYVEKPLKLVLKVG GSEVTELSTGSSGHDSSLFEDR
SDHDKHKDRKRKKRKKGEKQAPGEEKGRKRRRVKEDKKKRDRDR AENEVD
RDLQCHVPIRLDLPPEKPLTSSLAKQEEVEQTPLQEALNQLMRQLQSTMKEKI
25 KNNDYQSIEELKDNFKLMCTNAMIYNKPETIYYKAAKKLLHSGMKILSQERI
QSLKQSIDFMSDLQKTRKQKERTDACQSGEDSGCWQREREDSGDAETQAFRS
PAKDNKRKDKDVLEDKWRSSNSEREHEQIERVVQESGGKLTRRLANSQCEFE
RRKPDGTTTLGLLHPVDPIVGEPGYCPVRLG MTTGRLQSGVNTLQGFKEDKR
NRVTPVLYLNYGPYSSYAPHYDSTFANISKDDSDLIYSTYGEDSDLPNNFSISEF
30 LATCQDYPYVMADSLLDVLTGKGHSRSLQD LDMSSPEDEGQTRALDTAKEAE
ITQIEPTGRLESSSQDRLTALQAVTTFGAPAEVFDSEEA EVFQRKLDETT RLLRE
LQEAQNERLSTRPPPNMICLLGPSYREMYLAEQVTNNLKELTQQVTPGDV VSI
HGVRKAMGISVPSPIVGNSFVDLTGECEEPKETSTAECGP DAS

35 **SEQ ID NO: 31**

Figure 5- Full-length Amino Acid Sequence (mSPNA1) SEQ ID NO: 31

METPKETAVESSGPKVLETAEEIQHRRAEVLN QYQRFKDRVAERGQKLEESYH
YQVFRRDADDLEKWIMEKLEIAKD KTYEPTNIQGKYQKHESFVSEVQAKSRV
40 LPELEEIREARFAEDHFAHEATKTHLKQLRLLWDLLLELTQE KSDVLLRALKF
YQYSQECEDILEWVKEKEAIVTLVELGDDWERT EVLHKKFEEFQEELTARKG
KVDRVNQYANECAQEKHPKLPEIKAKQDEVNAAWDR LWSLALKRRESLSNA
ADLQRFKRDVNEAIQWMEEKEPQLTSEDYGKDLVSSEALFHNH KRLERNLAV
MDDKV KELCAKADKLMISHSADAPQIQMKLDLVSNWERIRALATNRYAKL
45 KASYGYHRFLSDYDELSGWMKEKTALINADELPTDVASGEALLARHQ QHKH
EIDSYDDRFSADATGQELLDGNHEASEEIREKMTILANDWAALLELWDK CQ
HQYRQCLDFHLFYRDSEQVDSWMSRQEAFL ENEDLGNSVGSVEALLQKHDD
FEEAFTAQEEKIITLDETATKLIDNDHYDSENIAAIRDG LLARRDALRERAATTR
KLLVDSQLLQQLYQDSDDLKTWINKKKKLADDDDYKDVQNLKSRVQKQQD
50 FEEELAVNEIMLNNLEKTGQEMIEDGHYASEAVAARLSEVANLWKELLEATAQ

QLIYIPLPDEKSRVAILKANLRKSPVAKDVDLEFLAKMTNGFSGADLTEICQRA
CKLAIRESIESEIRRERERQTNPSAMEVEEDDPVPEIRRDHFEEAMRFARRSVS
DNDIRKYEMFAQTLQQSRGFGSFRFPSGNQGGAGPSQGSGGGTGGSVYTEDN
DDDLYG

5

SEQ ID NO: 33

Figure 7- Full-length Amino Acid Sequence (mSTAT5A)

10 MAGWIIQAQQLQGDALRQMQVLYGQHFPIEVRHYLAQWIESQPWDAIDLNP
QDRGQATQLLEGLVQELQKKAHQVGEDGFLKIKLGHYATQLQNTYDRCP
MELVRCIRHILYNEQRLVREANNCSSPAGVLVDAMSQKHLQINQRFEELRLITQ
DTENELKKLQQTQEYFIIQYQESLRIQAQFAQLGQLNPQERMSRETALQKQV
SLETWLQREAQTLQQYRVELAEKHQKTLQLLRKQQTIIIDDELIQWKRRQQL
AGNGGPPEGSLDVLQSWCEKLAELIHWQNRQQIRRAEHLCCQLPIPGPVEEMLA
15 EVNATITDIISALVTSTFIEKQPPQVLKTQTKFAATVRLLVGGKLVNVMNPPQV
KATIISEQQAKSLLKNENTRNECSGEILNCCVMEYHQATGTLSAHFRNMSLK
RIKRADRRGAESVTEEKFTVLFESQFSVGSNELVFQVKTLSPVVVIVHGSQD
HNATATVLWDNAFAEPGRVPFAVPDKVLWPQLCEALNMKFKAQVSNRGLTK
ENLVFLAQKLFNISSNHLEDYNSMSVSWSQFNRENLPGWNYTFWQWFDGVM
20 EVLKKHHKPHWNDGAILGFVNKQQAHDLLINKPDGTFLLRFSDEIGGITIAW
KFDSPDRNLWNLKPFTTRDFSIRSLADRLGDLNLIYVFPDRPKDEVFAKYIT
PVLAKAVDGYVKPQIKQVPEFVNASTDAGASATYMDQAPSPVVCPPHYN
MYPPNPDPVLDQDGEFDLDESMDVARHVEELLRRPMDSLDARLSPPAGLFTS
ARSSLS

25

SEQ ID NO: 34

Figure 9- Full-length Amino Acid Sequence (mPTRF)

30 MEDVTLHIVERPYSGFDPDASSEGEPTQGEARATEEPSGTGSDELIKSDQVNGV
LVLSLLDKIIGAVDQIQLTQAQLEERQAEMEGAVQSIQGELSKLGKAHATTSNT
VSKLLEKVRKVSINVKTVRGSLERQAGQIKKLEVNEAELLRRRNFKVMYIQD
EVKLPAKLSVSKSLKESEALPEKEGDELGERPEDDTAAIELSSDEAVEVEEV
IIESRAERIKRSGLRVDDFKKAFSKEKMEKTKVRTRENLEKTRLKTKENLEK
TRHTLEKRMNKLGTRLVPVERREKLKTSRDKLRKSFTPDHVYARSKTAVYK
35 VPPFTFHVKKIREGEVEVLKATEMVEVGPEDDEVGAERGEATDLLRGSSPDV
HTLLEITEESDAVLVDKSDSD

SEQ ID NO: 35

Figure 10- Full-length Amino Acid Sequence (mAK031693)

40

MLLSPKFSLSTIHVRLTAKGLRNRLPPLGRKNTVIFHTVEKGRQKNPRSLCIQ
TQTAPDVLSSERTLELAQYKTKCESQSGFILHLRQLLSRGNTKFEALTVVIQHL
LSEREEALKQHKTLSQELVSLRGELVAASSACEKLEKARTDLQTAYQEFVQKL
NQQHQTDRTELENRLKDLYTAECEKLQSIYIEEAKEYKTQLQEQFDNLNAAH
45 ETTKLEIEASHSEKVELLKKTYETSLSEIKKSEMEKKSLEDLLNEKQESLEKQ
INDLKSENDALNERLKSEEQQLSREKANSKNPQVMYLEQELESLEKAVLEIKN
EKLHQQDMKLMKMEKLVNDNTALVDKLRKFQQENEELKARMDKHMAISRQ
LSTEQAALQESLEKESKVNKRLSMENEELLWKLHNGDLCSPKRSPTSSAIPFQ
SPRNSGSFSSPSISPR

50

SEQ ID NO: 36

Figure 11- Full-length Amino Acid Sequence (m1200014P03Rik)

5 MSGLVLGQRDEPAGHRLSQEILGSTKVVSQGLEALHSEHQAVLQSLSHTIEC
LQQGGHEEGLVHEKARQLRRSMENIELGLSEAQVMLALASHLSTVESEKQKL
RAQVRRLCQENQWLRDEL AGTQQRLQRSEQAVAQLEEEKKHLEFLRQLRQY
DEDGHGMEEKEGEATKDSLDDLFPNEEEEDSGNDLSRGQGAAAAQQGGYEIP
10 ARLRTLHNLVIQYAAQGRYEVAVPLCKQALEDLERTSGRGHPDVATMLNILAL
VYRDQNKYKEAAHLLNDALSIRESTLGRDHPAVAATLNNLAVLYGKRGKYKE
AEPLCQRALEIREKVLGTDHPDVAKQLNNLALLCQNQGKYEAVEYYYQRAL
AIYESQLGPDNPNVARTKNNLASCYLKQGKYSEAEALYKEILTCAHVQEFGSV
DDDHKPIWMHAEEREEMSRSRPRDSSAPYA EYGGWYKACRVSSPTVNTTLK
NLGALYRRQGGKLEAAETLEECALRSRKQGTDPISQTKVAELLGEGDGRKAIQE
15 GPGDSVKFEGGEDASVAVEWSGDGSGTLQRSGSLGKIRDVLRRSSELLVRKLQ
GTEPRPSSSSMKRAASLNYLNQPNAAPLQVSRGLSASTVDLSSSS

SEQ ID NO: 37

Figure 12- Full-length Amino Acid Sequence (mNNP1) (SEQ ID NO: 37)

20 MVPGVPLPPEIQLAQRLAGNEQVTRDRALRKLRKYIEARSQRATGGFTPDELL
KVWKGLFYCMWMQDKPLQQEELGRTIAQLVHAFHTTEAQHQFLKAFWQTM
IREWVGIDRLRLDKFYMLMRMVLSESLKAVKARGWDERQIEQLLELLTTEILN
PDSQAPSGVKSHFLEIFLEELAKVGAAELTADQNLQFIDPFCQIAARTKDSQVL
25 HKIIQSIFQTIVEQAPLAIEDIMNELDTQSGEGEASDGDDGEASDGDDGEASDD
DDGEASDGDDGDVADSDSDGADDDDDGDVSDGDGDDNDEGDSNKSSEGEQ
DLQDTPPKKLPAHTAHRA GPEADKEQAWDDDEENAGPVLQFDYEALANRLFK
LASRQSTPSQNRKRLYKVIQKLRELAGGTFPEDDVPEKAYKKMLEGRRERKK
KKKRLPKPQPQNKEAGSEAESSADPGPRKRKRNRKTDEKAGQGPPGKR
30 RKP GARAKGAGAAQQPKKRIQSSQSAE

SEQ ID NO: 38

Figure 14- Full-length Amino Acid Sequence (mGOLGA3) (SEQ ID NO: 38)

35 MDGASAKQDGLWESKSSSDVSSCPEASLETVGSLARLPDQQDTAQDASVEV
NRGFKEEGSPDRSSQVAICQNGQIPDLQLSLDPTTSPVGPDA STGSTASSLPLE
KEEQVRLQARKRLEEQLMQYRVKRHRERSSQPATKMKLFSTLDPELMLNPE
NLPRASTVA VTKEYSFLRTSVPRGPKVGS LGLLAHSKEKKNSKSSKIRSLADY
RTEDPSDSGGLGSTADAVGSSLKQSRSSTSVVSEVSPSSETDNRVESASMTGD
40 SVSEADGNESDSSSHSSLSARGACGVLGNVGMPTAYMVDGQEISAEALGQF
PSIKDVLQAAAAQHQQDNQEANG EVRSRRDSICSSVSMESSLAEPQDELLQIL
KDKRRLEGQVEALSLEASQALQEKAELQAQLAALSTRLQAQVEHSHSSQK
QDLSLSEVDTLKQSCWDLGRAMTDLQSMLEAKNASLASSNNDLQVAEEQYQ
RLMAKVEDMQRNILSKDNTVHDLRQQMTALQSQLQQVQLERTTTLTSKLQAS
45 QAEITSLQHARQWYQQQLT LAQEARVRLQGETAHIQVGQMTQAGLLEHLKL
ENVSLSHQLTETQHRSIKEKERIAVQLQSI EADMLDQEA AFVQIREAKTMVEE
DLQRRLEEFEGEREQLQKVADAAASLEQQLEQVKLTLFQRDQQLAALQQEH
LDVIKQLTSTQEALQAKGQSLDDLHTRYDELQARLEELQREADSREDAIHFLO
NEKIVLEVALQSAKSDKEELDRGARRLEEDTEETSGLLEQLRQDLAVKSNQV
50 EHLQQETATLRKQM QKVKEQFVLQKVMVEAYRRDATSKDQLINELKATKK

RLDSEMKELRQELIKLQGEKKTVEVEHSRLQKDMSLVHQQMAELEGHLQSV
 QKERDEMEIHLQSLKFDKEQMIALTEANETLKKQIEELQQEAKKAITEQKQK
 MKRLGSDLTSAQKEMKTKHKAYENAVSILSRRLQEALASKEATDAELNQLR
 AQSTGGSSDPVLHEKIRALEVELQNVGQSKILLEKELQE VITMTS QELEESREK
 5 VLELEDELQESRGFRRKIKRLEESNKKLALLEHERGKLTGLGQSNAALREHN
 SILETALAKREADLVQLNLQVQAVLQRKEEEDRQMKQLVQALQVSLEKEKM
 EVNSLKEQMAAARIEAGHNRRHFKAATLELSEVKKELQAKEHLVQTLQAEV
 DELQIQDGKHSQEIAQFQTELAEARTQLQLLQKKLDEQMSQQPTGSQEMEDL
 KWELDQKEREIQSLKQQLDLTEQQGKKELEGTQQTQTIKSELEMVQEDLSE
 10 TQKDKFMLQAKVSELKNNMKTLLQQNQQLKLDLRRGAACKKEPKGESNSSS
 PATPIKIPDCVPVPSLLELLRPPPAVSKEPLKNLNNCLQQLKQEMDSLQRQM
 EEHTITVHESLSSWAQVEAAPAEHAHPRGDTKLHNQNSVPRDGLGQ

SEQ ID NO: 39

15 **Figure 15- Full-length Amino Acid Sequence (mMYG1-pending)**

MGRRFLRGILTPLRSVLQAQHRMLGSEQDPPAKRPRNNLMAPPRIGTHNGTF
 HCDEALACALLRLLPEYANAEIVRTRDPEKLASCDIVVDVGGEYNPQSHRYD
 HHQRTFTETMSSLCPGKPWQTKLSSAGLVYLHFGRKLLAQLLGTSEEDSVVD
 20 TIYDKMYENFVEEVDVDNGISQWAEGEPRYAMTTTLSARVARLNPTWNQPN
 QDTEAGFRRAMDVLVQEEFLQRLNFYQHSWLPARALVEEALAQRFKVDSSGEI
 VELAKGGCPWKEHLYHLESELSPKVAITFVIYTDQAGQWRVQCVPEPHSFQS
 RLPLPEPWRLDKALDQVSGIPGCIFVHASGFIGGHHTREGALNMARATLAQ
 RPAPVPLANAVVQ

25

SEQ ID NO: 40

Figure 16- Partial Amino Acid Sequence (mAK044679(668))

MSSQSMKLPPSNSALPNQALGSIAGLTQNLNSVRQNGNPNMFGVGNTAAQ
 30 PRGMQQPPAQPLSSSQPNLRAQVPPPLSPQVPVSLKYAPNNGGLNPLFGPQ
 QVAMLNQLSQLNQLSQISQLQRLLAQQQRAQSQRSAPSANRQQQDQQGRPL
 SVQQQMMMQQSRQLDPSLLVKQQTTPPSQQPLHQPAMKSFLDNVMPHTTPELQ
 KGSPVNAFNSFPPIGLNSNLNVNMDMNSIKEPQSRLRKWTTVDSMSVNTSLD
 QNSSKHGAISSGFRLEESPFVPHYDFMNSSTSPASPPGSIGDGWPRAKSPNGSSS
 35 VNWPPEFRPGEPWKGYPNIDPETDPYVTPGSVINSLSINTVREVDHLRDRNSG
 SSSSLNTTLPSTSAWSSIRASNYNVPLSSTAQSTSARNSDSKLTWSPGSVTNTS
 LAHELWKVPLPPKNITAPSRPPPGLTGQKPPLSTWDNSPLRVGGGWGNSDAR
 YTPGSSWGESSGRITNWLVLKNLTPQIDGSTLRTLQMHGPLITFHLNPLHG
 NALVRYSSKEEVVKAQKSLHMCVLGNTTILAEFASEEEISRFFAQSQSLTPSPG
 40 WQSLGSSQSRLGSLDCSHSFSSRTDVNHWNAGLSGANCGDLHGTSLWGTP
 HYSTSLWGPPSSDPRGISSPINAFLSVDHLGGGGESM

SEQ ID NO: 41

Figure 17- Full-length Amino Acid Sequence (RS21C6)

45

MSVAGGEIRGDTGGEDTAAPGRFSFSPEPTLEDIRRLHAEFAAERDWEQFHQP
 RNLLLALVGEVGEAELFQWKTDGEPGPQGWSRPRERAAALQEELSDVLIYLV
 LAARCRVDLPLAVLSKMDINRRRYPAHLARSSSRKYTELPHGAISEDQAVGPA
 DIPCDSTGQTST

50

SEQ ID NO: 42

Figure 18- Full-length Amino Acid Sequence (KIAA0562) (SEQ ID NO: 42)

5 MPHKIGFVVVSSSGHEDGFSARELMIHAPT VSGWRSRFCQFPQEIVLQMVER
CRIRKLQLLAHQYMISSKIEFYISESLPEYFAPYQAERFRRLGYVSLCDNEKTG
CKARELKS VYVDAVGQFLKLIFHQNHVNKYNIYNQVALVAINIIGDPADFSDE
SNTASREKLIDHYLGHNSEDPALEGTYARKSDYISPLDDLAFDMYQDPEVAQI
IRKLDERKREAVQKERYDYAKKLKQAIADLQKVGERLGRYEVEKRCAVEKE
10 DYDLAKEKKQQMEQYRAEVYEQLELHSLDAELMRRPFDLPQLARSGSPC
HQPMPSLPQLEERG TENQFAEPFLQEKPSYSLTISPQHSADVPLLPATDHPH
KINAE SPLYDERPLPAIRKH YGEAVVEPEMSNADISDARRGGMLGEPEPLTEK
ALREASSAIDVLGETLVAEAYCKTWSYREDALLALSKKLMEMPVGTPKEDL
KNTLRASVFLVRRRAIKDIVTSVFQASLKLKMIITQYIPKHKLSKLETAHCVER
15 TIPVLLTRTGDSARLRVTAANFIQEMALFKEVKSLQIIPSYLVQPLKANSSVH
LAMSQMGLLARLLKDLGTGSSGFTIDNVMKFSVSALEHRVYEVRETAVRIIL
DMYRQHQASILEYLPDDSNTRRNILYKTIFEGFAKIDGRATDAEMRARRKA
ATEEA EKQKKEEIKALQGQLAALKEIQAEVQEKESDAVKPKNQDIQGGKAAP
AEALGIPDEHYLDNLCIFCGERSESFTEEGLDLHYWKHCLMLTRCDHCKQVV
20 EISLTHELLTECDKKDGF GKCYRCSEAVFKEELPRHIKHKDCNPAKPEKLAN
RCPLCHENFSPGEEAWKAHLMGPAGCTMNLRKTHILQKAPALQPGKSSAVA
ASGPLGSKAGSKIPTPKGGLSKSSSRTYAKR

SEQ ID NO: 43

25 Figure 19-Full-length Amino Acid Sequence (COPB)

MTAAENVCYTLINVPMDSEPPSEISLKN DLEKGDVKS KTEALKKVIIMILNGE
KLPGLLMTIIRFVLPLQDHTIKKLLL VFW EIVPKTTPDGRLLHEMILVCDAYRK
DLQHPNEFIRGSTLRFLCKLKEAELLEPLMPAIRACLEHRHSYVRRNAVLAITY
30 IYRNFEHLIPDAPELIHDFLVNEKDASCKRNAFMMLIHADQDRALDYLSTCID
QVQTFGDILQLVIVELIYKVCHANPSEARFIRCIYNLLQSSSPAVKYEAAGTL
VTLSAPTAKAAAQCYIDLIKESDNNVKLIVLDR LIELKEHPAHERVLQDLV
MDILRVLSTPDLEVRKKTLLQALDLVSSRNVEELVIVLKKEVIKTNNVSEHED
TDKYRQLLVRTLHSCSVRFPDMAANVIPVLMEFLSDNNEAAAADVLEFVREA
35 IQRFDNLRMLIVEKMLEV FHAIKSVKIYRGALWILGEYCSTKEDIQSVMT EIRR
SLGEIPIVESEIKKEAGELKPEEEITVGPVQKLVT EMGTYATQSALSSSRPTKKE
EDRPPLRGFLLDGDF FVAASLATT LTKIALRYVALVQEKKKQNSFVAEAMLL
MATILHLGKSSLPKKPITDDDVDRI SLCLKVLSECSPLMNDIFNKECRQSLSHM
LSAKLEEEKLSQKKESEKRNVTVPDDPISFMQLTAKNEMNCKEDQFQLSLL
40 AAMGNTQRKEAADPLASKLNKVTQLTGFS DPVYAEAYVHV NQYDIVLDVLV
VNQTSDTLQNCTLELATLGDLKLVEKPSPLTLAPHDFANIKANVKVASTENGI
IFGNIVYDVSGAASDRNCVVLSDIHIDIMDYIQPATCTDAEFRQMWA EFEWEN
KVTVNTNMVDLNDYLQHILKSTNMKCLTPEKALSGYCGFMAANLYARSIFG
EDALANVSIEKPIHQGPDAAVTGHIRIRAKSQGMALSLGDKINLSQK KTSI
45

SEQ ID NO: 44

Figure 20- Full-length Amino Acid Sequence (MYH7)

MGDSEMAVFGAAAPYLKSEKERLEAQTRPFDLKKDVFPDDKQEFVKAKI
50 VSREGGKVTAET EYGKTVTVKEDQVMQQNPPKFDKIEDMAMLTFLHEPAVL

YNLKDRYGSWMIYTYSGLFCVTNPNYKWLPVYTPEVVAAAYRGKKRSEAPPH
 IFSISDNAYQYMLTDRENQSILITGESGAGKTVNTRVIQYFAVIAAIGDRSKK
 DQSPGKGTLEDQIIQANPALEAFGNAKTVRNDNSSRFGKFIRIHFGATGKLAS
 ADIETYLLEKSRVIFQLKAERDYHIFYQILSNKKPELLDMLLITNNPYDYAFISQ
 5 GETTVASIDDAEELMATDNAFDVLGFTSEEKNSMYKLTGAIMHFGNMKFKL
 KQREEQAEPDGTTEEADKSAYLMGLNSADLLKGLCHPRVKVGVNEYVTKGQN
 VQQVIYATGALAKAVYERMFNWMVTRINATLETQKPRQYFIGVLDIAGFEIF
 DFNSFEQLCINFTNEKLQQFFNHMHMFVLEQEEYKKEGIEWTFIDFGMDLQACI
 DLIEKPMGIMSILEEECMFPKATDMTFKAKLFDNHLGKSANFQKPRNIKGKPE
 10 AHFSLIHYAGIVDYNIGWLQKNKDPLNETVVGLYQKSSLKLLSTLFANYAGA
 DAPIEKGKGKAKKGSSFQTVSALHRENLNKLMTNLRSTHPPHVRCIIPNETKS
 PGVMDNPLVMHQLRCNGVLEGIKIRKGFNRLYGDFRQRYRILNPAAIPEG
 QFIDSRKGAEKLLSSLDIDHNQYKFGHTKVFFKAGLLGLLEEMRDERLSRIITR
 IQAQSRGVLARMEYKKLLERRDSLLVIQWNIRAFMGVKNWPWMKLYFKIKP
 15 LLKSAEREKEMASMKEEFTRLKEALEKSEARRKELEEKMVSLLQEKNDLQLO
 VQAEQDNLADAEERCDQLIKNKIQLEAKVKEMNERLEDEEEMNAELTAKKR
 KLEDECSELKRDIDDLELTAKVEKEKHATENKVKNLTEEMAGLDEIIAKLTK
 EKKALQEAHQALDDLQAEEDKVNTLTAKVKLEQQVDDLEGSLEQEKKV
 RMDLERAKRKLEGLDKLTQESIMDLENDKQQLDERLKKKDFELNALNARIED
 20 EQALGSQLOKKLKLQARIEELEEELESERTARAKVEKLRSLSRELEEISERL
 EEAGGATSVQIEMNKKREAEFQKMRRDLEEATLQHEATAAALRKKHADSV
 ELGEQIDNLQRVKQKLEKEKSEFKLELDDVTSNMEQIIKAKANLEKMCRTLE
 DQMNEHRSKAEETQRSVNDLTSQRAKLQTENGELSRQLDEKEALISQLTRGK
 LTYTQQLDLKRQLEEEVKAKNALAHALQSARHDCDLLREQYEEETEAKAE
 25 LQRVLSKANSEVAQWRTKYETDAIQRTEELEEAKKKLAQRLQEAEEAVEAV
 NAKCSSLEKTKHRLQNEIEDLMVDVERSNAALDCKQRNFDKILAEWKQ
 KYEESQSELESSQKEARSLSTELFKLNAYEESLEHLETFKRENKNLQEEISDL
 TEQLGSSGKTIHELEKVRKQLEAEKMELQSALEEAASLEHEEGKILRAQLEF
 NQIKAEIERKLAEKDEEMEQAKRNHLRVVDSLQTSLEDAETRSRNEALRVKKK
 30 MEGDLNEMEIQLSHANRMAAEAQKQVKSLSLLKDTQIQLDDAVRANDDLK
 ENIAIVERRNLLQAELEELRAVVEQTERSRLAEQELIETSERVQLLHSQNTS
 LINQKKKMDADLSQLQTEVEEAQVECRNAEEKAKKAITDAAMMAEELKKEQ
 DTS AHLERMKKNMEQTIKDLQHRLDEAEQIALKGKKQLQKLEARVRELEN
 ELEAEQKRNAESVKGMRKSERRIKELTYQTEEDRKNLLRLQDLVDKLQLKV
 35 KAYKRQAEAEQANTNLSKFRKVQHELDEAEERADIAESQVKNLRAKSRDI
 GTKGLNEE

SEQ ID NO: 45

Figure 21- Partial Amino Acid Sequence (KIAA1633)

40 KVEELNSEIEKLSAAFAKAREALQKAQTQEFQGSSEDYETALSGKEALSAAALRS
 QNLTKSTENHRLRRSIKKITQELSDLQQERERLEKDLEEAHREKSKGDCTIRDL
 RNEVEKLRNEVNEREKAMENRYKSLLSESNNKLLHNQEQQVIKHLTESTNQKD
 VLLQKFNEKDLEVIQQNCYLMAAEDLELRSEGLITEKCSSQQPPGSKTIFSKEK
 45 KQSSDYEEELIQVLKKEQDIYTHLVKSLQESDSINNLAELNKFALRKQLEQD
 VLSYQNLRKLTLEEQISEIRRREEESFSLYSDQTFYLSICLEENNRFQVEHFSQEE
 LKKKVSDLIQLVKELYTDNQHLKKTIFDLSCMGFGNGFPDRLASTEQTTELLA
 SKEDEDTIKIGEDDEINFLSDQHLQQSNEIMKDLKGGCKNGYLRHTESKISDC
 DGAHAPGCLEEGAFINLLAPLFNEKATLLLESRPDLLKVVRELLLGQLFLTEQ
 50 EVSGEHLDGKTEKTPKQKGELVHFVQTNFSKPHDELKLSCEAQLVKAGEVP

KVGLKDASVQTVATEGDLRKFHEATREAWEEKPINTALSAEHRPENLHGVP
 GWQAALLSLPGITNREAKKSRLPILIKPSRSLGNMYRLPATQEVVTQLQSQILE
 LQGELKEFKTCNKQLHQKLILAEAVMEGRPTPDKTLLNAQPPVGAAYQDSPG
 EQKGIKTTSSVWRDKEMDSQQRSEIDSEICPPDDLASLPCKENPEDVLSPT
 5 SVATYLSSKSQPSAKVSVMGTDQSEINTSNETEYLKQKIHDLTELEGYQNFI
 FQLQKHSQCSEAIITVLCGTEGAQDGLSKPKNGSDGEEMTFSSLHQVRYVKH
 VKILGPLAPEMIDSRVLENLKQQLLEEYKLQKEQNLNMQLFSEIHNLQNKFR
 DLSPPRYDSLVSQARELSLQRQKIDGHGICVISRQHMNTMIKA FEELLQAS
 DVDYCVAEGFQEQLNQCAELLEKLEKFLNGKSVGVEMNTQNELMERIEED
 10 NLTYQHLLPESPEPSASHALSDYETSEKSFFSRDQKQDNETEKTSMVNFSQ
 DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGSEFVQGSTSIFASGSELHSS
 LTSEIHFLRKQNQALNAMLKGSRDQKQENDKLRESLSRKTVSLEHLQREYAS
 VKEENERLQKEGSEKERHNQQLIQEVRCSGQELSRVQEELKLRQQLLSQNDK
 LLQSLRVELKAYEKLDEEHRRLEASGEGWKGQDPFRDLHSLMEIQALRLQ
 15 LERSIETSSTLQSRKEQLARGAEKAQEGALTLAVQAVSIPEVPLQPKHDGD
 KYPMESDNSFDLFDSSQAVTPKSVSETPPLSGNDTDSLSCDSGSSATSTPCVSR
 LVTGHHLWASKNGRHVLGLIEDYEALLKQISQGQRLLAEMDIQTQEAPSSTS
 QELGTKGPHAPLSKFVSSVSTAKLTLEEAYRRLKLLWRVSLPEDGQCPLHCE
 QIGEMKAEVTKLHKKLFEQEKKLQNTMKLLQLSKRQEKVIFDQLVVTHKILR
 20 KARGNLELRPGGAHPGTCSPSRPGS

SEQ ID NO: 46

Figure 22- Partial Amino Acid Sequence (KIAA1288(1191))

25 THAYNPKSPPTQNSSASSVNWNSANPDDMVVDYETDPAVVTGENISLSLQGV
 EVFGHEKSSSDFISKQVLDMHKDSICQCPALVGTEKPKYLQHSCHSLEAVEGO
 SVEPSLPFVWKPNDNLNCAGYCDALNQTDFDMTVDKVNCTFISHHAIGKSQ
 SFHTAGSLPPTGRRSGSTSSLSYSTWTSSHSDKTHARETTYDRESFENPQVTPS
 EAQDMTYTAFSDVVMQSEVFDIGNQCACSSGKVTSEYTDGSQQRLVGEK
 30 ETQALTPVSDGMEVPNDALQEFFCLSHDESNSEPHSQSSYRHKEMGQNLRE
 TVSYCLIDDECPLMVPAFDKSEAQVLNPEHKVTETEDTQMVSKGKDLGTQN
 HTSELILSSPPGQKVGSSFGLTWDANDMVISTDKTMCMTSTPVLEPTKVTFVS
 PIEATEKCKKVEKGNRGLKNIPDSKEAPVNLCKPSLGKSTIKTNTPIGCKVRKT
 EIISYPRPNFKNVKAKVMSRAVLQPKDAALSKVTPRPQQTASSPSSVNSRQQ
 35 TVLSRTPRSDLNADKKAELINKTHKQQFNKLITSQAVHVTTHSKNASHRVPR
 TTSAVKSNQEDVDKASSNSACETGSVSALFQKIKGILPVKMESAECLEMTYV
 PNIDRISPEKKGEKENGTSMEKQELKQEMNETFEYGSFLGSAKTTTTSGRN
 ISKPDSCGLRQIAAPKAKVGPPVSCLRRNSDNRNPSADRAVSPQIRRVSSSSG
 NAAVIKYEEKPPKPAFQNGSSGSFYKPLVSRHVHLMKTPPKGPSRKNLFTA
 40 LNAVEKSRQKNPRSLCIQPQTAPDALPPEKTLELTQYKTKCENQSGFILQLKQ
 LLACGNTKFEALTVVIQHLLSEREEALKQHKTLSQELVNLRGELVTASTCEK
 LEKARNELQTVYEAFFVQQHQAETERENRLKEFYTREYEKL RDTYIEEAKEY
 KMQLQE QFDNLNAAHETSKLEIEASHSEKLELLKKAYEASLSEIKKGHEIEKK
 SLEDLLSEKQESLEKQINDLKSENDALNEKLSKSEEQKRRAREKANLKNPQIMY
 45 LEQELESKAVLEIKNEKLHQQDIKLMKMEKLVNNTALVDKLRFRQENEE
 LKARMDKHMAISRQLSTEQAVLQESLEKESKVNKRLSMENEELLWKLHNGD
 LCSPKRSPTSSAIPLQSPRNSGSFPSPSISPR

SEQ ID NO: 47

Figure 23- Full-length Amino Acid Sequence (mVCL)

5 MPVFHTRTIESILEPEAQQISHLVIMHEEGEVDGKAIPDLTAPVAAVQAAVSNL
VRVGKETVQTTEQILKRDMPPAFIKVENACTKLVQAAQMLQSDPYSPARD
YLIDGSRGILSGTSDLLTFDEAEVRKIIRVCKGILEYLTVAEVVETMEDLVTY
TKNLGPGMTKMAKMIDERQQELTHQEHRVMLVNSMNTVKELLPVLISAMKI
FVTSKNSKNQGIEEALKNRNFTVEKMSAEINEIIRVLQLTSWDEDAWASKDTE
10 AMKRALASIDSKLNQAKGWL RDPNASPGDAGEQAIRQILDEAGKV GELCAG
KERREILGTCKMLGQMTDQVADLRARGQGASPVAMQKAQQVSQGLDVVTA
KVENAARKLEAMTNSKQSIKKIDAAQNWLADPNGGPEGEEQIRGALAEAR
KIAELCDDPKERDDILRSLGEIAALTSKLGDLRRQGKGDSPEARALAKQVATA
LQNLQTKTNRAVANSRPAKAAVHLEGKIEQARRWIDNPTVDDRGGVQAAIR
15 GLVAEGHRLANVMMGPYRQDLLAKCDRVDQLTAQLADLAARGE GESPQAR
ALASQLQDSLKDLKAQM QEAMTQEVSDVFSDTTTPIKLLAVAATAPPDAPNR
EEVFDERAANFENHSGRLGATAEKAAAVGTANKSTVEGIQASVKTARELTPQ
VISAARILLRNPQNQAAYEHFETMKNQWIDNVEKMTGLVDEAIDTKSLLDAS
EEAIKKDLCKVAMANIQQMLVAGATSIARRANRILLVAKREVEN SEDPK
20 FREAVKAASDELSKTISPMVMDAKAVAGNISDPDLQKSFLDSGYRILGAVAK
VREAFQPQEPDFPPPPDLEQLRLTDELAPPKPPLPEGEVPPPRPPPPPEEKDEEF
PEQKAGEVINQPMMAARQLHDEARKWSSKGNDIIAAAKRMALLMAEMSR
LVRGSGTKRALIQCAKDIAKASDEVTRLAKEVAKQCTDKRIRTNLLQVCERI
PTISTQLKILSTVKATMLGRTNISDEESEQATEMLVHNAQNLMQSVKETVREA
25 EAASIKIRTDAGFTLRWVRKTPWYQ

SEQ ID NO: 48

**Figure 24- Partial cDNA Nucleotide Sequence Encoding the Amino Acid
Sequence of SEQ ID NO: 6 (807 nucleotides in total)**

30 5'-GGGCACGACTCCAGCCTCTTCGAGGACAGAAGCGACCATGACAAACAC
AAGGACAGAAAACGGAAAAAGAGGAAGAAAGGCGAGAAGCAGGCTCCC
GGGGAAGAGAAGGGGAGAAAACGGAGAAGAGTCAAGGAGGATAAAAAG
AAGCGGGATCGAGACCGTGCAGAGAATGAGGTGGACAGAGATCTCCAGT
35 GTCATGTCCCTATAAGATTAGACTTACCTCCTGAGAAGCCTCTTACAAGCT
CGTTAGCCAAACAAGAAGAAGTAGAACAGACACCCCTTCAGGAAGCTTTG
AATCAGCTCATGAGACAATTGCAAAGTACCATGAAAGAAAAGATCAAGA
ATAACGACTACCAGTCCATAGAAGAACTAAAGGATAACTTCAAGCTAATG
TGTACTAATGCAATGATTTACAATAAGCCAGAGACCATTTATTATAAAGCT
40 GCAAAGAAGCTGTTGCACTCAGGGATGAAAATTCTCAGTCAGGAGAGAAT
TCAGAGCCTGAAGCAGAGTATAGACTTCATGTCAGACTTGCAGAAAACTC
GGAAGCAGAAAGAACGAACAGATGCCTGTCAGAGTGGGGAGGACAGCGG
CTGCTGGCAGCGCGAGAGGGAAGACTCTGGAGATGCTGAAACACAGGCC
TTCAGAAGCCCCGCTAAGGACAATAAAAGGAAAGACAGAGATGTGCTTG
45 AAGACAAATGGAGAAGCAGCAACTCAGAAAGGGAGCATGAGCAGATTGA
GCGCGTTGTCCAGGAGTCAGGAGGCAAGCTAACACGGCGGCTGGCAAAC
AGTCAGTGTGAATTTGAA-3'

SEQ ID NO: 49

Figure 25- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of SEQ ID NO: 10 (348 nucleotides in total)

5
5'-GCCATCGTGGAGCGCAGAGCCAAACCTGCTGCGGGCTGAGATTGAG
GAGCTGCGGGCCACGCTGGAGCAGACGGAGAGGAGCAGGAAGATTG
CAGAGCAGGAGCTGCTGGACGCCAGTGAGCGCGTGACGCTCCTCCAC
ACCCAGAACACGAGCCTCATCAACACCAAGAAGAAGCTGGAAAATGA
10 TGTTCACAGCTGCAGAGTGAAGTGAAGAAGTGATTCAAGAGTCAC
GCAATGCAGAAGAGAAGGCTAAGAAAGCCATTACTGATGCCGCCATGA
TGGCGGAGGAGCTGAAGAAGGAGCAGGACACCAGCGCCCACCTGGA
GCGGATGAAGAAGAACATGGAG-3'

15 **SEQ ID NO: 50**

Figure 26- Partial cDNA Nucleotide Sequence Encodin

5'-GAAAAACAAGAGCTGAAACAAGAGATTATGAATGAGACTTTTGAATAT
GGTTCCTCTGTTTTTGGGCTCTGCTTCAAAAACAACGACCACCTCAGGTAGG
20 AATATATCCAAGCCTGACTCCTGCGGTTTGAGGCAAATAGCTGCTCCAAA
AGCCAAAGTGGGGCCCCCTGTTTCCTGTTTGAGGCGGAACAGTGACAATA
GAAATCCCAGTGCTGATCGAGCCGTATCTCCTCAGAGGATCAGGCGTG
TCCAGTTCCTGCTGGTAATGCCGCTGTCATCAAGTATGAGGAGAAACCTCC
AAAACCAGCATTTCAGAATGGTTCCTCAGGATCCTTTTATTTGAAGCCTTT
25 GGTATCCAGGGCTCATGTTCACTTGATGAAAACCTCCAAAAGGTCCTTC
GAGAAAAAATTTATTTACAGCTCTTAATGCAGTTGAAAAGAGCAAGCAAA
AGAATCCTCGAAGCTTATGTATCCAGCCACAGACAGCTCCCGATGCGCTG
CCCCCTGAAAAAACACTTGAATTGACGCCATATAAAACAAAATGTGAAAA
CCAAAGTGGAATTTATCCTGCAGCTCAAGCAGCTTCTTGCCCTGTGGTAATAC
30 CAAGTTTGAGGCATTGACAGTTGTGATTACAGCACCTGCTGTCTGAGCGGG
AGGAAGCACTGAAACAACAAAAACCCTATCTCAAGAACTTGTTAACCTC
CGGGGAGAGCTAGTCACTGCTTCAACCACCCGTGAGAAATTAGAAAAAGC
CAGGAATGAGTTACAAACAGTGTATGAAGCATTCGTCCAGCAGCACCAGG
CTGAAAAAACAGAACGAGAGAATCGGCTTAAAGAGTTTACACCAGGGA
35 GTATGAAAAGCTTCGGGACACTTACATTGAAGAAGCAGAGAAGTACAAA
ATGCAATTGCAAGAGCAGTTTGGAACCTTAAATGCTGCGCATGAAACCTT
TAAGTTGGAATTGAAGCTAGCCACTCAGAGAACTTGAATTGCTAAAGA
AGGCCTATGAAGCCTCCCTTTAGAAAATTAAGAAAGGCCATGAAATAGAA
AAGAAATCGCTTGAAGATTTACTTTCTGAGAAGCAGGAATCGCTAGAGAA
40 GCAAATCAATGATCTGAAGAGTGAAAATGATGCTTTAAATGAAAAATTGA
AATCAGAAGAACAAAAAAGAAGAGCAAGAGAAAAAGCAAATTTGAAAA
ATCCTCAGATCATGTATCTAGAACAGGAGTTAGAAAGCCTGAAAGCTGTG
TTAGAGATCAAGAATGAGAACTGCATCAACAG

45 **SEQ ID NO: 51**

FHOS (251-500 AA)

TGAPPWANLVSILEEKNGADPELLVYTVTLINKTLAALPDQDSFYDVTDALE
QQGMDTLVQRHLGTAGTDVDLRTQLVLYENALKLEDGDIEEAPGAGRRER
50 RKPSSEEGKRSRRSLEGGGCPARAPEPGPTGPASPVGPTSSTGPALLTGPASSP

VGPPSGLQASVNLFPITISVAPSADTSSERSIYKARFLENVAAAETEKQVALAQ
GRAETLAGAMPNEAGGHPDARQLWDSPETAPAARTPQSPA

SEQ ID NO: 52

5 FHOS (501-750 AA)

PCVLLRAQRSLAPEPKEPLIPASPKAEPIWELPTRAPRLSIGDLDFSDLGEDEDQ
DMLNVESVEAGKDIPAPSPPLLLSGVPPPPPLPPPPPIKGPFPPLPLAAPLP
HSVPDSSALPTKRKTVKLFWRDVKLGGHGVASASRFGPCATLWASLDPVSV
DTARLEHLFESRAKEVLPSKKAGEGRRTMTTVLDPKRTNAINIGLTTLPVHV
10 IKAALLNFDEFAVSKDGIKLLTMMPTTEERQKIE

SEQ ID NO: 53

FHOS (652-810 AA)

TLWASLDPVSVDTARLEHLFESRAKEVLPSKKAGEGRRTMTTVLDPKRTNAI
15 NIGLTTLPVHVVIKAALLNFDEFAVSKDGIKLLTMMPTTEERQKIEGAQLAN
PDIPLGPAENFLMTLASIGGLAARLQLWAFKLDYDSMEREIAEPLFDLKVGM
Q

SEQ ID NO: 54

20 FHOS (840-954 AA)

ELSYLEKVSVDKDTVRRQSLHHLCSLVLQTRPESSDLYSEIPALTRCAKVDF
EQLTENLGQLERRSRAAEESLRSLAKHELAPALRARLTHFLDQCARRVAMLR
IVHRRVCNRF

25 SEQ ID NO: 55

mBC028274(908) (BC028274.1) 199-576

DRKQHLDKTDWADAEDLNSQNEAELRRQVEERQQETEHVYELLGNKIQLLQE
EPRLAKNEATEMETLVEAEKRCNLELSERWTNAAKNREDAAGDQEKPDQYS
30 EALAQRDRRIEELRQSLAAQEGLEQLSQEKQQLLHLEEPASMEVQPVPKG
LPTQQKPDLDHETPTTQPPVSESHLAELQDKIQQTEATNKILQEKLNLSCELKS
AQESSQKQDTTIQSLKEMLSRESETEELYQVIEGQNDTMAKLREMLHQS
GQLHSSEGIAPAQQQVALLDLQSALFCSQLEIQRLQRLVRQKERQLADGKRC
VQLVEAAQEREHQKEAAWKHNQELRKALQHLQGELHKSQQLHVLEAEK
35 YNEIRTQGQNIQHLSH

SEQ ID NO: 56

mBC028274(908) (BC028274.1) 250-565

EPRLAKNEATEMETLVEAEKRCNLELSERWTNAAKNREDAAGDQEKPDQYS
EALAQRDRRIEELRQSLAAQEGLEQLSQEKQQLLHLEEPASMEVQPVPKG
LPTQQKPDLDHETPTTQPPVSESHLAELQDKIQQTEATNKILQEKLNLSCELKS
AQESSQKRDTTIQSLKEMLSRESETEELYQVVEGQNDTMAKLREMLHQS
40 GQLHSSEGIAPAQQQVALLDLQSALFCSQLEIQRLQRLVRQKERQLADGKRC
VQLVEAAQEREHQKEAAWKHNQELRKALQHLQGELHKSQQLHVLEAEK
YNETR

SEQ ID NO: 57

mBC026864(777) 256-417

AAVLGEADDGNLDLDMKSGLENTAALDNQPKGALKKLIYAAKLNASLKALE
GERNQVYTQLSEVDQVKEDLTEHIKSLESKQASLQSEKTEFESESQKLQKQKLK
VITELYQENEMKLHRKLTVEENYRLEKEEKLSKVDEKISHATEELETQRQRAK
DLEEE

5

SEQ ID NO: 58
m5730504C04Rik 127-407

10 KQTKVEGELEEMERKHQQLLEEKNILAEQLQAETELFAEAEEMRARLAACK
QELEEILHDLESRVEEEEERNQILQNEKKKMQAHIQDLEEQLDEEEGARQKLQ
LEKVTAEAKIKKMEEEVLLLEDQNSKFIKEKKLMEDRIAECSSQLAESEEKAK
NLAKIRNKQEVMSDLEERLKKEEKTRQELEKAKRKLDGETTDLQDQIAELQ
AQVDELKVQLTKKEEELQGALARGDDETLHKNNALKVARELQAQIAELQED
IESEKASRNKAQKQKRDLEE

15

SEQ ID NO: 59
mMYH9 853-1191

20 ELTKVREKYLAENRLTEMETMQSQLMAEKLQLQEQLQAETELCAEAEELR
ARLTAKEQELEEICHDLERAVEEEEEERCQYLQAEKKKMQQNIQELEEQLEEEE
SARQKLQLEKVTTEAKLKKEEDQIIMEDQNCKLAKEKKLLEDRAEFTTNL
MEEEKSKSLAKLKNKHEAMITDLEERLRREEKQRQELEKTRRKLEGDSTD
SDQIAELQAQIAELKMQLAKKEEESQAALARVEEEAAQKNMALKKIRELETQ
ISELQEDLESERASRNKAQKQKRDLGEELEALKTELEDTLDESTAAQQELRSKR
25 EQEVSILKKTLEDEAKTHEAQIQGMR

SEQ ID NO: 60
mp116Rip 943-1024

30 IYTELSIAKAKADCDISRLKEQLKAATEALGEKSPEGTTVSGYDIMKSKSNPDF
LKKDRSCVTRRLRNIRSKSVIEQVSWDN

SEQ ID NO: 61
TPM3 157-243

35

KNVTNNLKSLEAQAEKYSQKEDKYEEEIKILTDKLKEAETRAEFAERSVAKLE
KTIDDLEDELYAQKLEYKAISEELDHALNDMTSI

SEQ ID NO: 62
MYH6 876-1113

40

EEKMVSLQEKNDLQLQVQAEQDNLNDAEERCDQLIKNKIQLEAKVKEMNE
RLEDEEEMNAELTAKKRKLEDECSELKKDIDDLELTLAKVEKEKHATENKVK
NLTEEMAGLDEIIAKLTKEKKALQEAHQALDDLQVEEDKVNSLSKSKVKLE
45 QQVDDLEGSLEQEKKVRMDLERAKRKLEGDLKLTQESIMDLENDKLQLEEK
LKKKEFDINQQNSKIEDEQALALQLQKKLKKN

50

SEQ ID NO: 63
mMBLR 41-209

5 APAAGEEGPASLGQAGAAGCSRSRPPALEPERSLGRLRGRFEDYDEELEEEEEE
MEEEEEEEEEMSHFSLRLESGRADSEDEEERLINLVELTPYILCSICKGYLIDAT
TITECLHTFCKSCIVRHFYYSNRCPKCNIVVHQTQPLYNIRLDRQLQDIVYKLV
INLEERE

SEQ ID NO: 64
ZFP144 7-304

10 IKITELNPHLMCALCGGYFIDATTIVECLHSFCKTCIVRYLETNKYCPMCDVQ
VHKTRPLLSIRSDKTLQDIVYKLVPGLFKDEMRRRDFYAAAYPLTEVPNGSNE
DRGEVLEQEKGALGDDEIVSLSIEFYEGVRDREEKKNLTENGDGDKKEKTGVR
15 FLRCPAAMTVMHLAKFLRNKMDVPSKYKVEILYEDEPLREYYTLMDIAYIYP
WRRNGPLPLKYRVQPACKRLTLPTVPTPSEGTNTSGASECESVSDKAPSPATL
PATSSSLPSPATPSHGSPSSHGPPATHPTSPTPPS

SEQ ID NO: 65
Figure 36- Full-length Amino Acid Sequence (ZNF144(294)) (SEQ ID NO: 65)

MHRTTRIKITELNPHLMCALCGGYFIDATTIVECLHSFCKTCIVRYLETNKYCP
MCDVQVHKTRPLLSIRSDKTLQDIVYKLVPGLFKDEMRRRDFYAAAYPLTEVP
25 NGSNEDRGEVLEQEKGALSDDIVSLSIEFYEGAGDRDEKKGPLENGDGDKE
KTGVRFLRCPAAMTVMHLAKFLRNKMDVPSKYKVEVLYEDEPLKEYYTLM
DIAYIYPWRRNGPLPLKYRVQPACKRLTLATVPTPSEGTNTSGASESSGATTAA
NGGSLNCLQTPSSTSRRGRKMTVNGAPVPPLT

SEQ ID NO: 66
14-3-3epsilon 44-255

LLSVAYKNVIGARRASWRIISSIEQKEENKGGEDKLKMIREYRQMVETELKLI
CCDILDVLDKHLIPAANTGESKVFYYKMGDYGHRYLAEFATGNDRKEAAEN
35 SLVAYKAASDIAMTELPPTHPIRLGLALNFSVFYYEILNSPDRACRLAKAAFD
DAIAELDTLSEESYKDSTLIMQLLRDNLTWTSMDMQGDGEEQNKEALQDVED
ENQ

SEQ ID NO: 67
14-3-3epsilon 89-249

VETELKLICCDILDVLDKHLIPAANTGESKVFYYKMGDYGHRYLAEFATGND
RKEAAENSLVAYKAASDIAMTELPPTHPIRLGLALNFSVFYYEILNSPDRACRL
AKAAFDDAIAKLDLTLSEESYKDSTLIMQLLRDNLTWTSMDMQGDGEEQNKE
45 ALQD

SEQ ID NO: 68
14-3-3epsilon 84-238

5 EYRQMVETELKLICCDILDVLDKHLIPAANTGESKVFYYKMKGDYHRYLAEF
ATGNDRKEAAENSLVAYKAASDIAMTELPPTHPIRLGLALNFSVFYYEILNSP
DRACRLAKAAFDDAIAELDTLSEESYKDSTLIMQLLRDNLTLWTSDMQGD

SEQ ID NO: 69
Figure 38- Partial Amino Acid Sequence (BF672897(87)) (SEQ ID NO: 69)

10 REASHPLCTGPAQAGLAHRCLLAALMGKRLGTGDCLWPTQLLGQWPV
TLVCLRPLCPLMFLVLELELLPGTLQLHPPCLIPPGRPGH

SEQ ID NO: 70
mCATNB 704-871

15 QSYLDSGIHSGATTAPSLSGKGNPEEEDVDTSQVLYEWEQGFSQSFTQEQVA
DIDGQYAMTRAQVRVRAAMFPETLDEGMQIPSTQFDAAHPTNVQRLAEPSQML
KHAVVNLINYQDDAELATRAIPELTKLLNDEDQVVVNKAAMVMVHQLSKKEAS
20 RHAIMRSPQMVSIVRTMQNTNDVETARCTAGTLHNLSHHREGLLAIFKSGGI
PALVKMLGSPVDSVLFYAITTLHNLLHQEGAKMAVRLAGGLQKMVALLNK

SEQ ID NO: 71
mCATNS 704-871

25 KALSAIAELLTSEHERVVKAASGALRNLAVDARNKELIGKHAIPNLVKNLPGG
QLNSSWNFSEDTVVSILNTINEVIAENLEAAKKLRETQGIEKLVLINKSGNRSE
KEVRAAALVLQTIWGYKELRKPLEKEGWKKSDFQVNINNASRSQSSHSYDDS
30 TLPLIDRNQ

SEQ ID NO: 72
mSWAN 1-162

35 MAVVIRLQGLPIVAGTMDIRHFFSGLTIPDGGVHIVGGELGEAFIVFATDEDAR
LGMMRTGGTIKGSKVTLSSKTEMQNMIELSRRRFETANLDIPPANASRSGPP
PSSGMSSRVNLPATVPNSNNPSPSVVTATTSVHESNKNIQTFSTASVGTAPPSM

SEQ ID NO: 73
mSWAN 1-144

40 MAVVIRLQGLPIVAGTMDIRHFFSGLTIPDGGVHIVGGELGEAFIVFATDEDAR
LGMMRTGGTIKGSKVTLSSKTEMQNMIELSRRRFETANLDIPPANASRSGPP
PSSGMSSRVNLPATVPNFNNPSPSVVTATTSVHESN

SEQ ID NO: 74
m2300003P22Rik(248) 1-188

45 KEGRREHAFVPEPFTGTNLAPSLWLHRFEVIDDLNHWDHATKLRFLKESLKG
DALDVYNGLSQAQGDFFSVKQALLRAFGAPGEAFSEPEEVLFANSMGKGYG
50 LKGKVGHPVVRFLVDSGAQVSVVHPALWEEVTDGDLDTLRPFNNVVKVANG

AEMKILGVWDTEISLGKTKLKAFLVANASAE

SEQ ID NO: 75

mTAKEDA015 1-261, Figure 43

5

SPYSPRGGSNVIQCYRCGDTCKGEVVRVHNNHFHIRCFTCQVCGCGLAQSGF
FFKNQEYICAQDYQQLYGTRCDSCRDFITGEVISALGRTPKCFVCSLCRKPF
PIGDKVTFSGKEVCQTCSQSMTSSKPIKIRGPSHCAGCKEEIKHGQSLLALDK
QWHVSCFKCQTCSVILTGEYISKDGVYPYCESDYHSQFGIKCETCDRYISGRVLE
10 AGGKHYHPTCARCVRCHQMFTEGEEMYLGTGSEVWHPICKQAARAEKK

SEQ ID NO: 76

PCNT2 2942-3134

15

ESKDEVPGSRLHLGSARRAAGSDADHLREQQRELEAMRQRLLSAARLLTSFT
SQAVDRTVNDWTSSNEKAVMSLLHTLEELKSDLSRPTSSQKKMAAELQFQFV
DVLLKDNVSLTKALSTVTQEKLELSRAVSKLEKLLKHHLQKGCSPGRSERSA
WKPDETAPQSSLRRPDPGRLPAAASEEAHTSNAKMDK

20

SEQ ID NO: 77

KPNA4 107-338

25

IDDLIKSGILPILVHCLERDDNPSLQFEAAWALTNIASGTSEQTQAVVQSNAPV
LFLRLLHSPHQNVCEQAVWALGNIIGDGPQCRDYVISLGVVEPLLSFISPSIPIT
FLRNVTWVMVNLCRHKDPPPPMETIQEILPALCVLIHHTDVNILDVTVWALS
YLTDAGNEQIQMVIDSGIVPHLVPLLSHQEVKVQTAALRAVGIIIVTGTDEQTQ
VVLNCDALSHFPALLTHP

30

SEQ ID NO: 78

MAPKAP1 356-480

HRLRFTTDVQLGISGDKVEIDPVTNQKASTKFWIKQKPISIDSDLLCACDLAEE
KSPSHAIFKLTYLSNHDKHLYFESDAATVNEIVLKVNYILESRASTARADYF
AQKQRKLNRRTSFSFQKE

35

SEQ ID NO: 79

mTPT1 16-172

40

DIYKIREIADGLCLEVEGKMVSRTEGAIDDSLIGGNASAEGPEGEGTESTVVTG
VDIVMNHHLQETSFTKEAYKKYIKDYMKSLKGKLEEQKPERVKPFMTGAAE
QIKHILANFNNYQFFIGENMNPDGMVALLDYREDGVTPFMIFFKDGLEMEKC

45

SEQ ID NO: 80

mAK014397(679) 441-640

50

MKHNLELTMAEMRQSLEQERDRLIAEVKKQLELEKQQAVIDETKKRQWCAN
CKKEAIFYCCWNTSYCDYPCQQAHWPEHMKSCTQSATAPQQEADAEASTET
GNKSSQGNSSNTQSAPSEPASAPKEKEAPAEKSKDSSNSTLDLSGSRETPSSML
LGSNQSSVSKRCDKQPAYTPTTTDRQPHPNYPAQKYHSRSSKAGL

SEQ ID NO: 81
mHRMT1L1 19-205

5 EEDPVDYGCQMQLLDGAQLQLQPEEFVAIADYTATDETQLSFLRGEKILI
LRQTTADWWGERAGCCGYIPANHLGKQLEEDPEDTWQDEEYFDSYGL
KLHLGMLADQPRRTTKYHSVILQNKESLKDKVILDVGC GTGIISLFC AHHARPK
AVYAVEASDMAQHTSQLVLQNGFADTITVFQ

10 **SEQ ID NO: 82**
HRMT1L1(241) 2-241

ATSGDCPRSESQGEPAECSEAGLLQEGVQPEEFVAIADYAATDETQLSFLRG
EKILILRQTTADWWGERAGCCGYIPANYVGKHVDEYDPEDTWQDEEYFGS
15 YGTLKLHLEMLADQPRRTTKYHSVILQNKESLTDKVILDVGC GTGIISLFC AHY
ARPRAVYAVEASEMAQHTGQLVLQNGFADIITVYQQKVEDVVLPEKVDVLV
SEWMGTCLLKQQSSEGDASKDTTGVLDCQQT I

20 **SEQ ID NO: 83**
SAT(204) 1-186

RRGRSRETNEEPPPPTVQVQGPQPREEKQKTKMAKFVIRPATAADCSDILRL
IKELAKYEYMEEQVILTEKDLEDGFGEHPFYHCLVAEVPKEHWTPEGHSIVG
FAMYYFTYDPWIGKLLYLEDDFFVMSDYRGFGIGSEILKNLSQVAMRRCSSM
25 HFLVAEWNEPSINFYKRRGASDLSSEEG

SEQ ID NO: 84
BC023995(305) 1-294

30 FCELSSPAEMANVLCNRRARLVSYLPGFCSLVKRVVNP KAFSTAGSSGSDESHV
AAAPPDICSRTVWPDETMGPFQDQRFQLPGNIGFDCHLNGTASQKKSLVH
KTLPDVLAEPLSSERHEFVMAQYVNEFQGNDA PVEQEINSAETYFERARVEC
AIQTCPELLRKDFESLFPEVANGKLMILTVTQKTKNDMTVWSEEVEIEREVLL
EKFINGAKEICYALRAEGYWADFIDPSSGLAFFGPYTNNTLFETDERYRHLGF
35 SVDDLGCCKVIRHSLWGTHVVVGSIFTNATP

SEQ ID NO: 85
BC023995(305) 72-299

40 GPFQDQRFQLPGNIGFDCHLNGTASQKKSLVHKTLPDVLAEPLSSERHEFV
MAQYVNEFQGNDA PVEQEINSAETYFESARVECAIQTCPELLRKDFESLFPEV
ANGKLMILTVTQKTKNDMTVWSEEVEIEREVLL EK FINGAKEICYALRAEGY
WADFIDPSSGLAFFGPYTNNTLFETDERYRHLGFSVDDLGCCKVIRHSLWGTH
VVVGSIFTNATPD SHIM

45

SEQ ID NO: 86
TTN 26343 -26503

50 LTIQKARVTEKAVTSPPRVKSPEPRVKSPEAVKSPKRVKSPEPSHPKAVSPTET
KPTPTEKVQHLPVSAPPEITQFLKAEASKEIAKLTCVVESSVLRAKEVTWYKD

GECLKENGHFQFHYSADGTYELKINNLTESDQGEYVCEISGEGGTSKANLQF
MG

SEQ ID NO: 87

5 Figure 27- Partial Amino Acid Sequence (mBC028274(908))

TRPIIARAQCPGLGTMKRTDSGSICHHAPPPCWAHHAPRQSPRQPSSRERRPPE
RAGSWAVAAEEEEAAAPWMRHYFGEDDGEMVPRTSSAAAFSLSDTKDRGP
PVQSQTWRSARVPFGQAHSRAFEKPPLVQTQALRDFEKHLNLDLKKENFSL
10 KLRIYFLEERMQQKYEVSREDVYKRNIELKVEVESLKRELQDRKQHLDKTWA
DAEDLNSQNEAELRRQVEERQQETEHVYELLGNKIQLLQEEPRLAKNEATEM
ETLVEAEKRCNLELSERWTNAAKNREDAAGDQEKPDQYSEALAQRDRRIEEL
RQSLAAQEGLEQLSQEKRQLLHLEEPASMEVQPVPKGLPTQQKPDLHETPT
TQPPVSESHLAELQDKIQQTEATNKILQEKLNDLSCELKSAQESSQKQDTTIQS
15 LKEMLSRESETEELYQVIEGQNDTMAKLREMLHQSGLGQLHSSEGIAPAQQ
QVALLDLQSALFCSQLEIQRLQRLVRQKERQLADGKRCVQLVEAAAQEREHQ
KEAAWKHNQELRKALQHLQELHSHSKSQQLHVLEAEKYNEIRTQGGNIQHLS
HLSHKEQLIQELQELLQYRDNDKTLDTNEVFLEKLRQRIQDRAVALERVID
EKFSALEEKDKELRQLRLAVRDRDHLERLRCVLSANEATMQSMESLLRARG
20 LEVEQLTATCQNLQWLKEELETKEFGHWQKEQESIIQQLQTS LHDRNKEVEDLS
ATLLCKLGPQSEVAEELCQRLQRKERMLQDLLSDRNKQAVEHEMEIQGLLQ
SMGTREQERQAAAEKMOVAFMERNSELQALRQYLGGKELMTSSQTFISNP
AGVTSIGPHHGEQTDQGSQMMPSRDDSTSLTAREEASIPRSTLGSDTVAGLE
KELSNAKEELELMAKKKKK

25

SEQ ID NO: 88

Figure 28- Full-length Amino Acid Sequence (mBC026864(777))

MRADFNPSGFSLELAVCVLSVGLLAVVFLWRGFRSIRSRYVGREKKLAL
30 SALIEEKCKLLDKVSIVQKEYEGLESSLKEASFEKESTEASQLEFVEGSQISEAT
YENLEQSKSKLEDEILLLEEKLEERAKHSEQDELMA DISKRIQSLEDESKSLK
SQVAEAKTTFRIFEINEERLKGAIKDALNENSQ LQESQKQLLQETEMMKEQVN
DLDKQKVALEESRAQAEQALSEKESQIETLVTSLLKMKDWA AVLGEADDGNL
DLDMKSGLENTAALDNQPKGALKKLIYAAKLNASLKALEGERNQVYTQLSE
35 VDQVKEDLTEHIKSLESKQASLQSEKTEFESESQKLQQLKVITELYQENEMK
LHRKLTVEENYRLEKEEKLSKVDEKISHATEELET CRQRAKDLEEEELERTIHSY
QGQVISHEKKAHDNWLAARTLERNLNDLRKENA HNRQKLTETEFKFELLEK
DPYALDVPNTAFGREHSPYGPSPLGRPPSETRA FLSPPTLLEGPLRLSPLLPGGG
GRGSRGPENLLDHQMNTERGESSYDRLSDAPRA PSDRSLSPWEQDRRMTAH
40 PPPGQPYSDPALQRQDRFYPSNGRLSGPAELRSY NMPSLDKVDGPVPSEMESS
GNGTKDNLGNSNVPDSPAEC EAAGRGFPPPPFPV RDPLFPVDPRSQFMRR
GPSFPPPPPGSIYAAPRDYFPPRDFPGPPLPFP GRTVYAPRGFPPYLPPRAGFFP
PPHPESRSELPPDLIPPSKEPAADPPETQEA

45 SEQ ID NO: 89

Figure 29- Full-length Amino Acid Sequence (m5730504C04Rik)

MDGKQACERMIRALELDPNLYRIGQSKIFFRAGVLAHLEEERDLKITDIHFFQ
AVCRGYLARKAFAKKQQQLSALKVLQRNCAAYLKL RHWQWWRVFTKVKP
50 LLQVTRQEEELQAKDEELLKVKEKQTKVEGELEEMERKHQQLLEEKNILAEQ

LQAETELFAEAEEMRARLAACKQELEEILHDLESRVEEEEERNQILQNEKKK
 MQAHIQDLEEQLDEEEGARQKLQLEKVTAEAKIKKMEEEEVLLLEDQNSKFIK
 EKKLMEADRIAECSSQLAEIEEEKAKNLAKIRNKQEVMSIDLEERLKKEEKTRQE
 LEKAKRKLDGETTDLQDQIAELQAQVDELKVQLTKKEEELQGALARGDDET
 5 LHKNNALKVARELQAQIAELQEDFESEKASRNKAQKQKRDLEEELEALKTEL
 EDTLDTTAAQQELRTKREQEVAELKKALEDETKNHEAQIQDMRQRHATALE
 ELSEQLEQAKRFKANLEKNKQGLETDNKELACEVKVLQQVKAESEHKRKKL
 DAQVQELHAKVSEGDRLRVELAEKANKLQNELDNVSTLLEAEKKGIKFAK
 DAAGLESQQLDTQELLQEETRQKLNLSRRIRQLEEEKNSLQEQQEEEEEEARKN
 10 LEKQVLALQSQLADTKKKVDDDLGTIESLEEAKKKLLKDVEALSQRLEEKVL
 AYDKLEKTKNRLQQELDDLTVDLHQHQIVSNLEKKQKKFDQLLAEEKGISA
 RYAEERDRAEAEAREKETKALSLARALEEAEAKEEFERQNKQLRADMEDL
 MSSKDDVGKNVHELEKSKRALEQQVEEMRTQLEEELEDELQATEDAKLRLEV
 NMQAMKAQFERDLQTRDEQNEEKKRLLLKQVRELEAELEDERKQRALAVAS
 15 KKKMEIDLKDLEAQIEAANKARDEVIKQLRKLQAQMKDYQRELEEARASRD
 EIFAQSKSEKKLKSLEAEILQLQEELASSERARRHAEQERDELADEIANSASG
 KSALLDEKRRLEARIAQLEEELEEEQSNMELLNDRFRKTTLQVDTLNTELAEE
 RSAAQKSDNARQQLERQNKELKAKLQLEGA VKSKFKATISALEAKIGQLEE
 QLEQEA KERAANKLVRRTKKLKEIFMQVEDERRHADQYKEQMEKANAR
 20 MKQLKRQLEEAEEEATRANASRRKLQRELDDATEANEGLSREVSTLKNRLRR
 GGPISFSSSRSGRRQLHIEGASLELSDDDTESKTSVDNDTQPPQSE

SEQ ID NO: 90-

Figure 30- Full-length Amino Acid Sequence (mMYH9)

25 MAQQAADKYLYVDKNFINNPLAQADWAAKKLVWVPSSKNGFEPASLKEEV
 GEEAIVELVENGKKVKVNKDDIQKMNPFPKFSKVEDMAELTCLNEASVLHNL
 KERYYSGLIYTYSGLFCVVPINPYKNLPIYSEEIVEMYKGGKRHEMPPHIYAITD
 TAYRSMMDREDQSILCTGESGAGKTENTKKVIQYLAHVASSHKSKKDQGE
 30 LERQLLQANPILEAFGNAKTVKNDNSSRFKGFIRINFDVNGYIVGANIETYLLE
 KSRAIRQAKEERTFHIFYLLSGAGEHLKTDLLLEPYNKYRFLSNGHVTIPGQ
 QDKDMFQETMEAMRIMGIPEDQMGLLRVISGVLQLGNIAFKKERNTDQAS
 MPDNTAAQKVSHLLGINVTDFTRGILTPRIKVGRDYVQKAQTKEQADFAIEA
 LAKATYERMFRWLVLRLINKALDKTKRQGASFIGILDIAGFEIFDLNSFEQLCIN
 35 YTNEKLQQLFNHTMFILEQEEYQREGIEWNFIDFGLDLQPCIDLIEKPAGPPGIL
 ALLDEECWFPKATDKSFVEKVVEQGHFKPKFKPKQLKDKADFCIIHYAGKV
 DYKADEWLMKNMDPLNDNIATLLHQSSDKFVSELWKDVDRIIGLDQVAGMS
 ETALPGAFKTRKGMFRTVGQLYKEQLAKLMATLRNTNPNFVRCIIPNHEKKA
 GKLDPHLVLDQLRCNGVLEIGIRICRQGFPNRVVFQEFRQRYEILTPNSIPKGF
 40 DGKQACVLMIKALELDSNLYRIGQSKVFFRAGVLAHLEERDLKITDVIIGFQ
 ACCRGYLARKAFAKRQQQLTAMKVLQRNCAAYLRLRNWQWWRLFTKVKP
 LLNSIRHEDELLAKEAELTKVREKHLAAENRLTEMETMQSQLMAEKLQLQEQ
 LQAETELCAEAEELRARLTAKKQELEEICHDLARVEEEEEERCQYLQAEKKK
 MQQNIQELEEQLEEESARQKLQLEKVTTEAKLKKLEEDQIIMEDQNCKLAK
 45 EKKLLEDRAVEFTTNLMEEEEKSKSLAKLKNKHEAMITDLEERLRREEKQRQ
 ELEKTRRKLEGDSTDLSQIAELQAQIAELKMQLAKKEEELQAALARVEEEA
 AQKNMALKKIRELETQISELQEDLESERASRNKAQKQKRDLEEELEALKTELE
 DTLDDSTAAQQELRSKREQEVSKLKTLEDEAKTHEAQIQEMRQKHSQAVEEL
 ADQLEQTKRVKATLEKAKQTLENERGELANEVKALLQGKGDSSEHKRKKVEA
 50 QLQELQVKFSEGERVRTELADKVTKLQVELDSVTGLLSQSDSKSSKLTKDFA

LESQLODTQELLQEENRQKLSLSTKLKQMEDEKNSFREQLLEEEEEAKRNLEK
QIATLHAQVTDMMKKKMEDGVGCLETAEEAKRRLQKDLEGLSQRLEEKVAAY
DKLEKTKTRLQQELDDLVDLDHQRQSVSNLEKKQKKFDQLLAEEKTISAKY
AEERDRAEAEAREKETKALSLARALEEAMEQKAELERLNKQFRTEMEDLMS
5 SKDDVGVKSVHELEKSKRALEQQVEEMKTQLEEELEDELQATEDAKLRLEVNL
QAMKAQFERDLQGRDEQSEEKKKQLVRQVREMEAELEDERKQSRMAMAAR
KKLEMDLKDLEAHIDTANKNREEAIKQLRKLQAQMKDCMRELDDTRASREE
ILAQAKENEKKLKSMEAEMIQLEELAAAERAKRQAQQRDELADEIANSSG
KGALALEEKRRLEARIALLEEELEEEQGNTELINDRLKKANLQIDQINTDLNLE
10 RSHAQKNENARQQLERQNKELKAKLQEMESA VKSKYKASIAALEAKIAQLE
EQLDNETKERQAASKQVRRTEKKLKDVLQVEDERRNAEQFKDQADKASTR
LKQLKRQLEEAEEEAQRANASRRKLQRELEDATETADAMNREVSSLKNKLR
RGDLPPFVTRRIVRKGTGDCSDEEVDGKADGADAKAAE

15 **SEQ ID NO: 91**

Figure 31- Full-length Amino Acid Sequence (mp116Rip)

MSAAKENPCRKFQANIFNKSCKQNCFKPRESHLLNDEDLTQAKPIYGGWLLL
APDGTDFDNPVHRSRKWQRRFFILYEHGLLRYALDEMP TTLPQGTINMNQCT
20 DVVDGEARTGQKFSLCILTPDKEHFIRAETKEIISGWLEMLMVYPRTNKQNKQ
KKRKVEPPTPQEPGPAKMAVTSSSGGTSGSSSSIPSAEKVPTTKSTLWQEEMR
AKDQPDGTSLSPAQSPSQSPPAACTPREPGLESKEDESTISGDRVDGGRKVR
VESGYFSLEKAKQDLRAEEQLPPLLSPSPSTPHSRRSQVIEKFEALDIEKAEH
METNMLILTTPSSDTRQGRSERRAIRKRDFASEAPTAPLSDACPLSPHRAKS
25 LDRRSTESSMTPDLLNFKKGWLTQKYEDGQWKKHWFVLADQSLRYRDSV
AEEAADLDGEINLSTCYDVTEYPVQRNYGFIHTKEGEFTLSAMTSGIRRNWI
QTIMKHVLPASAPDVTSSLPEGKNKSTSFETCSRSTEQEAEPGEPDPEQKKS
ARERRREGRSKTFDWAEFRPIQQALAQERASAVGSSDSGDPGCLEAEPGELER
ERARRREEPRKRFGMLDTIDGPGMEDTALRMDIDRSPGLLGTPDLKTQNVHV
30 EIEQRWHQVETTP LREEKQVPIAPLHLSLED R SERLSTHELTSLLEKELEQSQK
EASDLLEQNRLQLDQLRVALGREQSAREGYVLQATCERGFAAMEETHQKKIE
DLQRQHORELEKLREEKDRLLAEETAATISAIEAMKNAHREEMERELEKSQR
SQISSINSIDIEALRRQYLEELQSVQRELEV LSEQYSQKCLENAHLAQALEAERQ
ALRQCQRENQELNAHNQELNNRLAAEITRLRTLTTGDGGGESTGLPLTQGKD
35 AYELEVLLRVKESEIQYLKQEISSLKDELQTALRDKKYASDKYKDIYTELSIAK
AKADCDISRLKEQLKAATEALGEKSPEGTTVSGYDIMKSKSNPDFLKKDRSC
VTRQLRNIRSKSVIEQVSWDN

SEQ ID NO: 92

40 **Figure 32- Full-length Amino Acid Sequence (TPM3)**

MMEAIIKKKMQMLKLDKENALDRAEQAEAEQKQAEERSKQLEDELAA
MQKKLKGTEDELDR A QERLATALQKLEEA EKA ADESERGMKV IENRA
LKDEEKME LQE IQLKEAKHIAEEADRKYEEVARKLVIEGDLERTEERA
45 ELAESKCSELEEEELKNVTNNLKSLEAQAEKYSQKEDKYEEEIKILTDK
LKEAETRAEFAERSVAKLEKTIDDLEDELYAQKLKYKAISEELDHALND
MTSI

SEQ ID NO: 93**Figure 33- Full-length Amino Acid Sequence (MYH6)**

MTDAQMADFGAAAQYLRKSEKERLEAQTRPFDIRTECFVPDDKEEFVKAKIL
5 SREGGKVIAETENGKTVTVKEDQVLQQNPPKFDKIEDMAMLTFLHEPAVLFN
LKERYAAWMIYTYSGLFCVTVPYKWLVPVYNAEVVAAYRGKKRSEAPPHIF
SISDNAYQYMLTDRENQSILITGESGAGKTVNTRKVIQYFASIAAIGDRGKKD
NANANKGTLEDQIIQANPALEAFGNAKTVRNDNSSRFGKFIRIHFGATGKLAS
ADIETYLLEKSRVIFQLKAERNYHIFYQILSNKKPELLDMLLVTNPNPYDYAFVS
10 QGEVSVASIDDSEELMATDSAFDVLGFTSEEKAGVYKLTGAIMHYGNMKFK
QKQREEQAEPDGTEDADKSAYLMGLNSADLLKGLCHPRVKVGNEYVTKGQ
SVQQVYYYSIGALAKAVYEKMFNWMVTRINATLETKQPRQYFIGVLDIAGFEIF
DFNSFEQLCINFTNEKLQQFFNHMHMFVLEQEEYKKEGIEWTFIDFGMDLQACI
DLIEKPMGIMSILEEECMFPKATDMTFKAKLYDNHLGKSNFQKPRNIKGGKQ
15 EAHFSLIHYAGTVDYNILGWLEKNKDPLNETVVVALYQKSSLKLMATLFSSYA
TADTGDSGKSKGGKKKGSSSFQTVSALHRENLNKLMTNLRTTHPHFVRCIIPNE
RKAPGVMDNPLVMHQLRCNGVLEGIRICRKGFPNRILYGDFRQRYRILNPVAI
PEGQFIDSRKGTEKLLSSLDIDHNQYKFGHTKVFFKAGLLGLEEMRDERLSRI
ITRMQAQARGQLMRIEFKKIVERRDALLVIQWNIRAFMGVKNWPWMKLYFK
20 IKPLLKSAETEKEMATMKEEFGRIKETLEKSEARRKELEEKMVSLLOEKNDLQ
LQVQAEQDNLNDAEERCDQLIKNKIQLEAKVKEMNERLEDEEEMNAELTAK
KRKLEDECESELKKDIDDLLETLAKVEKEKHATENKVKNLTEEMAGLDEIIAK
LTKEKKALQEAHQALDDLQVEEDKVNSLSKSKVKLEQQVDDLEGSLEQEK
KVRMDLERAKRKLEGDLKLTQESIMDLENDKLQLEEKLLKKKEFDINQQNSKI
25 EDEQVLALQLQKKLKENQARIEELEEELEAERTARAKVEKLRSDSLRELEEIS
ERLEEAGGATSVQIEMNKKREAEFQKMRRDLEEATLQHEATAAALRKKHAD
SVAELGEQIDNLQRVKQKLEKEKSEFKLELDDVTSNMEQIIKAKANLEKVSRT
LEDQANEYRVKLEEAQRSLNDDFTTQRAKLQTENGELARQLEEKEALISQLTR
GKLSYTQQMEDLKRQLEEEGKAKNALAHALQSARHDCDLLREQYEEETEAK
30 AELQRVLSKANSEVAQWRTKYETDAIQRTTEELEEAKKKLAQRLQDAEEAVE
AVNAKCSSLEKTKHRLQNEIEDLMVDVERSNAAAAAALDKKQRNFDKILAEW
KQKYEESQSELESSQKEARSLSTELFKLKNAYEESLEHLETFKRENKNLQEEIS
DLTEQLGEGGKNVHELEKVRKQLEVEKLELQSALEEAASLEHEEGKILRAQ
LEFNQIKAEIERKLAEKDEEMEQAKRNHQRVVDLSLQTSLSLDAETRSRNEVLRV
35 KKKMEGDLNEMEIQLSHANRMAAEAQKQVKSLSLLKDTQIQLDDAVRAN
DDLKENIAIVERNNLLQAELEELRAVVEQTERSRLAEQELIETSERVQLLHS
QNTSLINQKKKMESDLTQLQSEVEEAQECRNAEEKAKKAITDAAMMAEEL
KKEQDTS AHLERMKKNMEQTIKDLQHLRLDEAEQIALKGGKKQLQKLEARVR
ELEGELEAEQKRNAESVKGMRKSERRIKELTYQTEEDKKNLLRLQDLVDKLO
40 LKVKAYKRQAEAEQANTNLSKFRKVQHELDEAEERADIAESQVNKLRAK
SRDIGAKQKMHDEE

SEQ ID NO: 94**Figure 34- Full-length Amino Acid Sequence (mMBLR)**

45 MDEAETDATENKRASEAKRASAMPPPPPPPPISPPALIPAPAAGEEGPASLGQA
GAAGCSRSRPPALEPERSLGRRLGRFEDYDEEELEEEEEEEMEEEEEEEEEMSHFSL
RLESGRADSEDEEERLINLVELTPYILCSICKGYLIDATTITECLHTFCKSCIVRH
FYYSNRCPKCNIVVHQTQPLYNIRLDRQLQDIVYKLVINLEEREKKQMHDYK
50 ERGLEVPKPAAPQVPSSKGKTKKVLESVFRIPPELDMSLLLEFIGANEDTGHF

KPLEKKFVRVSGEATIGHVEKFLRRKMGLDPACQVDIICGDHLLERYQTLREIR
RAIGDTAMQDGLLVLHYGLVVSPLKIT

SEQ ID NO: 95

5 Figure 35- Full-length Amino Acid Sequence (mZFP144)

MHRTTRIKITELNPHLMCALCGGYFIDATTIVECLHSFCKTCIVRYLETNKYCP
MCDVQVHKTRPLLSIRSDKTLQDIVYKLVPGLFKDEMKRRRDFYAAAYPLTEVP
NGSNEDRGEVLEQEKGALGDDEIVSLSIEFYEGVRDREEKKNLTENGDDGKE
10 KTGVRFLRCPAAMTVMHLAKFLRNKMDVPSKYKVEILYEDEPLKEYYTLM
DIAYIYPWRRNGPLPLKYRVQPACKRLTLPTVPTPSEGTTNTSGASECESVSDKAPS
PATLPATSSSLPSPATPSHGSPSSHGPPATHPTSPTPPSTAAGTTTATNGGTSNCLQ
TPSSTSRRGRKMTVNGAPCPP

15 SEQ ID NO: 96

Figure 37- Full-length Amino Acid Sequence (14-3-3epsilon)

MDDREDLVYQAKLAEEQAERYDEMVESMKKVAGMDVELTVEERNLLSVAYK
NVIGARRASWRIISSIEQKEENKGGEDKMKMIREYRQMVETELKLICCDILDVL
20 DKHLIPAANTGESKVFFYYKMGDYHRYLAEFATGNDRKEAAENSLVAYKAAS
DIAMTELPPTHPIRLGLALNFSVFYYEILNSPDRACRLAKAAFDDAIAELDTLS
EESYKDSTLIMQLLRDNLTWTSDMQGDGEEQNKEALQDVEDENQ

SEQ ID NO: 97

25 Figure 39- Full-length Amino Acid Sequence (mCATNB)

MATQADLMELDMAMEPDRKAAVSHWQQQSYLDSGIHSGATTTAPSLSGKGN
PEEEDVDTSQVLYEWEQGFSSQFTQEQVADIDGQYAMTRAQRVRAAMFPETL
DEGMQIPSTQFDAAHPTNVQRLAEPSQMLKHAVVNLINYQDDAELATRAIPEL
30 TKLLNDEDQVVVNKAAMVHVHQLSKKEASRHAIMRSPQMVSIVRTMQNTN
DVETARCTAGTLHNLSSHREGLLAIFKSGGIPALVKMLGSPVDSVLFYAITTLH
NLLHHEGAKMAVRLAGGLQKMVALLNKTNVKFLAITTDCLQILAYGNQES
KLIILASGGPQALVNIMRTYTYEKLWTTSRVLKVLSSVCSNKPAAVEAGGMQ
ALGLHLTDPSQRLVQNCLWTLRNLSDAATKQEGMEGLLGTLVQLLGSDDINV
35 VTCAAGILSNLTCNNYKNKMMVCQVGGIEALVRTVLRAGDREDITEPAICALR
HLTSRHQEAEMAQNAVRLHYGLPVVVKLLHPPSHWPLIKATVGLIRNLALCP
ANHAPLREQGAIPRLVQLLVRAHQDTQRRTSMGGTQQQFVEGVRMEEIVEGC
TGALHILARDVHNRI VIRGLNTIPLFVQLLYSPIENIQRVAAGVLC ELAQDKEA
AEAIEAEGATAPLTELHLSRNEG VATYAAAVLFRMSEDKPQDYKKRLSVELTSS
40 LFRTEPMAWNETADLGLDIGAQGEALGYRQDDPSYRSFHSGGYGQDALGMD
PMMEHEMGGHHPGADYPVDGLPDLGHAQDLMDGLPPGDSNQLAWFDTDL

SEQ ID NO: 98

Figure 40- Full-length Amino Acid Sequence (mCATNS)

45 MDDSEVESTASILASVKEQEAQFEKLTRALEEERRHVSAQLERVVRVSPQDANS
LMANGTLTRRHQNGRFVGDADLERQKFSDLKLNGPQDHNHLLYSTIPRMQE
PGQIVETYTEEDPEGAMSVSVETDDGTTRRTETT VKKVVKMTTTRTVQPV
PMGPDGLPVDASAVSNYIQT LGRDFRKNNGGGPGPYVGQAGTATLPRNFH
50 YPPDGYGRHYEDGYPGGSDNYGSLSRVTRIEERYRPSMEGYRAPSQRQDVYGP

QPQVRVGGSSVDLHRFHPEPYGLEDDQRSMGYDDL DYGMMSDYGTARRTG
 TPSDPRRRLRSYEDMIGEEVPPDQYYWAPLAQHERGSLASLDSLRKGMPPPS
 NWRQPELPEVIAMLGFR LDA VKSNAAYLQHLCYRNDKVKTDVAKLKGIPIL
 VGLLDHPKKEVHLGACGALKNISFGRDQDNKIAIKNCDGVPALVRLLRKARD
 5 MDLTEVITGTLWNLSSHDSIKMEIVDHALHALTDEVIIPHSGWEREPNEDCKP
 RHIEWESVLTNTAGCLRNVSSEARRKLRECDGLVDALIFIVQAEIGQKDS
 DSKLVENCVCLLRNLSYQVHREIPQAERYQEALPTVANSTGPHAASCFGAKK
 GKGGKPTEDPANDTVDFPKRTSPARGYELLFQPEVVRIYISLLKESNTPAILEA
 SAGAIQNL CAGRWTYGRYIRSALRQE KALSARAELLTSEHERVVKAASGALR
 10 NLAVDARNKELIGKHARPNLVKNLPGGQQNSSWNFSED TVVSILNTINEVIAE
 NLEAAKKLRETQGIEKLVLINKSGNRSEKEVRAAALVLQTIWGYKELRKPLE
 KEGWKKSDFQVNLNNASRSQSSHSYDDSTLPLIDRNQKSDNNYSTLNERGDH
 NRTLDRSGDLGDMEPLKGAPLMQKI

15 **SEQ ID NO: 99**

Figure 41- Full-length Amino Acid Sequence (mSWAN)

MAVVIRLQGLPIVAGTMDIRHFFSGLTIPDGGVHIVGGELGEAFIVFATDEDAR
 LGMMRTGGTIKGSKVTL LSSKTEMQNMIELSRRRFETANLDIPPANASRSGPP
 20 PSSGMSSRVNLPATVPNFNNPSPSVVTATTSVHESNKNIQTFSTASVGTAPPSM
 GTSFGSPTFSSTIPSTASPMNTVPPPIPIPIAMPSPPLPSIPPIVPPVPTLPPVP
 PVPPIPPVPSVPPMTTLPPMSGMPPLNPPPVAPLPAGMNGSGAPIGLNNNMNPV
 FLGPLNPVNSIQMNSQSSVKSLPINPDDLYVSVHGMPPFSAMENDVREFFHGLR
 VDAVHLLKDHVGRNNGNGLVKFLSPQDTFEALKRNRMLMIQRYVEVSPATER
 25 QWVAAGGHITFKQSMGPSGQAHPPTLPRSKSPSGQKRSRSPHEAGFCVY
 LKGLPFEAENKHVIDFFKKLDIVEDSIYIAYGPNGKATGEGFVEFRNDADYKA
 ALCRHKQYMGNRFIQVHPITKKGMLEKIDMIRKRLQNF SYDQRELVLNPEGE
 VSSAKVCAHITNIPFSITKMDVLQFLEGIPVDENAVHVLVDNNGQGLGQALVQ
 FKTEDDAHKSEHLHRKKLNGREAFVHIVTLEDMREIEKNPPAQGKKGLKISVP
 30 GNPAPVPVIPSAGMPAAGIPTAGIPGAGLPSAGMPGAGMPSSGMPGMPGPGI
 PGAGIPGPAMPGPAMPGPAMPGPAMPGPAMPGPAMPGPAMPGPAMPGP
 AIPGPAIPGPAIPGPTIPGAGIPSAGGEEHVFLTVGSKEANN GPPFNFGNFGGPN
 AFGPPLPPPGLGGGGAFGDARPGMP SVGNSGLPGLGLDVPFGFGGNNISGPSG
 FGGIPQNFNGPGSLNAPPGFGSGPPGLGSVPGHLSGPPAFGPGPGPLIHIGGP
 35 PGFGASSGKPGPTIIVQNMPFTV SIDEILDFYGYQVIPGSVCLKYNEKGMPT
 GEAMVAFESRDEATAAVIDLNDRPIGSRKV KLVLG

SEQ ID NO: 100

Figure 42- Partial Amino Acid Sequence (m2300003P22Rik(248))

40 -KEGRREHAFVPEPFTGTNLAPSLWLHRFEVIDDLNHWDHATKLRFLKESLKG
 DALDVYNGLSQAQGD FSFVKQALLRAFGAPGEAFSEPEEVL FANSMGKGY
 LKGKVGHVPVRFLVDSGAQVS VHPALWEEVTDGDLDTLRPFNNVVKVANG
 AEMKILGVWDTEISLGKTKLKA EFLVANASAEAAIGTDVLQDHNAVLD FEHR
 45 TCTLKGKKFRLLPVGSSLEDEFDLELIEEEEGSSAPEGSH

SEQ ID NO: 101

Figure 44- Full-length Amino Acid Sequence (PCNT2)

NH₂-MEVEQEQRRRKVEAGRTKLAHFRQRKTKGDSSHSEKKTAKRKGSAMD
5 ASVQEESPVTKEDSALCGGGDICKSTSCDDTPDGAGGAFAAQPEDCDGEKRE
DLEQLQKQVNDHPPEQCGMFTVSDHPPEQHGMFTVGDHPPEQRGMFTVSD
HPPEQHGMFTVSDHPPEQRGMFTISDHQPEQRGMFTVSDHTPEQRGIFTISDH
PAEQRGMFTKECEQECELAITDLESGREDEAGLHQSQAVHGLELEALRLSLSN
MHTAQLELTQANLQKEKETALTELREMLNSRRAQELALLQSRQQHELELLRE
10 QHAREKEEVVLRCGQEAELKEKLQSEMEKNAQIVKTLKEDWESEKDLCLE
NLRKELSAKHQSEMEDLQNQFQKELAEQRAELEKIFQDNQAERARNLSEH
HQAIEKLREDLQSEHGRCLEDLEFKFKESEKEKQLELENLQASYEDLKAQSQ
EEIRRLWSQLDSARTSRQELSELHEQLLARTSRVEDLEQLKQREKTQHESELE
QLRIYFEKKLRDAEKTYQEDLTLLQQRQLQGAREDALLDSVEVGLSCVGLLEEK
15 PEKGRKDHVDELEPERHKESLPRFQAELEESHHRHQLEALESPLCIQHEGHVSD
RCCVETSALGHEWRLEPSEGHSQELPWVHLQGVQDGDLEADTERAARVLGL
ETEHKVQLSLLQTELKEEIELLKIEENRNLYGKLQHETRLKDDLEKVKHNLIED
HQKELNNAKQKTELMKQEFQRKETDWKVMKEELQREAEKLTLMLELRE
KAESEKQTIINKFELREAEMRQLQDQQAQILDRLSLTEQQGRLLQLEQDLT
20 SDDALHCSQCGRPPPTAQDGELAAHLVKEDCALQLMLARSRFLEERKEITEK
FSAEQDAFLQEAQEQHARELQLLQERHQQLLSVTAELEARHQAALGELTAS
LESKQGALLAARVAELQTKHAADLGALETRHLSSLDSLESCYLSEFQTIREEH
RQALELLRADFEEQLWKKDSLHQTILTQELEKLKRKHGEGELQSVRDHLRTEV
STELAGTVAHELQGVHQGEFGSEKKTALHEKEETLRLQSAQAQPFHQEEKES
25 LSLQLQKKNHQVQQLKDQVLSLSHEIEECRSELEVLQQRERENREGANLLS
MLKADVNLSHSERGAQDALRRLGLFGETLRAAVTLRSRIGERVGLCLDDA
GAGLALSTALALEEMWSDVALPELDRTLSECAEMSSVAEISSHMCEFLMSPE
SVRECEQPIRRVFQSLSLAVDGLMEMALDSSSSQLEEARQIHSRFEKEFSFKNEE
TAQVVRKHQELLECLKEESAACAELALELHKTQGTLEGFKVETADLKEVLA
30 GKEDSEHRLVLELESLRRQLQQAQEAALREECTRLWSRGEATATDAEARE
AALRKEVEDLTKEQSETRKQAEKDRSALLSQMKILESELEEQLSQHRGCAKQ
AEAVTALEQQVASLDKHLRNQRQFMDEQAAREHEREEFQQEIQRLEGQLR
QAAKPQPWGPGRDSQQAPLDGEVELLQQKLREKLDEFNELAIQKESADRQVL
MQEEIEIKRLEEMNINIRKKVAQLQEEVEKQKNIVKGLEQDKEVLKKQQMSSL
35 LLASTLQSTLDAGRCPEPPSGSPPEGPEIQLEVTQRALLRRESEVLDLKEQLEK
MKGDLESKNEEILHLNLKLDMQNSQTAVSLRELEEENTSLKVITYRSSEIEELK
ATIENTLQENQKRLQKEKAEEIEQLHEVIEKLQHEL SLMGPVVHEVSDSQAGSL
QSELLCSQAGGPRGQALQGELEAALEAKEALSRLADQERRHSQALEALQQR
LQGAEEAAELQLAELERNVALREAEVEDMASRIQEFEAALKAKEATIAERNL
40 EIDALNQRKAAHSAELEAVLLALARIRRALEQQPLAAGAAPPQLWLRAQCA
RLSRQLQVLHQRFLRCQVELDRRQARRATAHTRVPGAHPQPRMDGGAKAQ
VTGDVEASHDAALEPVVPDPQGDLPVLVTLKDAPLCKQEGVMSVLTVCQR
QLQSELLLVKNEMRLSLEDGGKGKEKVLEDCQLPKVDLVAQVKQLQEKLNRL
LLYSMTFQNVDAADTKSLWPMASAHLLSSWSDSDGGEEDISPHTDCDA
45 NTATGGVTDVIKNQAIDACDANTTPGGVTDVIKNWDSLIPDEMPDSPIQEKSE
CQDRSLSSPTSVLGGSRHQSHTAEGPRKSPVGMMLDLSSWSSPEVLRKDWTL
EPWPSLPVTPHSGALSLCSADTSLGDRADTSLPQTQGPGLLCSPGVSAAALAL
QWAEPPADDHHVQRTAVEKDVEDFITTSFDSQETLSSPPPGLEGKADRSEKS
DGSFGGARLSPGSGGPEAQTAGPVTPASISGRFQPLPEAMKEKEVRPKHVKAL
50 LQMVRDESHQILALSEGLAPPSGEPHPPRKEDEIQDISLHGGKTQEVPTACPD

WRGDLLQVVQEAFEKEQEMQGVELQPRLSGSDLGGHSSLLERLEKIIREQGD
LQEKSLHLRLPDRSSLLSEIQALRAQLRMTHLQNQEKLQHLRTALTSAEARG
SQQEHQLRRQVELLAYKVEQEKCAGDLQKTLSEEQEKANSVQKLLAAEQTV
VRDLKSDLCESRQKSEQLSRSLCEVQQEVLQLRSMSSKENELKAALQELESE
5 QGKGRALQSQLEEEQLRHLQRESQSAKALEELRASLETQRAQSSRLCVALKH
EQTAKDNLQKELRIEHSRCEALLAQERSQLSELQKDLAAEKSRTLELSEALRH
ERLLTEQLSQRTEACVHQDTQAHHALLQKLKEEKSrvvdlQAMLEKVQQQ
ALHSQQQLEAEAQKHCEALRREKEVSATLKSTVEALHTQKRELRCSLERERE
KPAWLQAELEQSHPRLKEQEGRKAARRSAEARQSPAAAEQWRKWQORDKEK
10 LRELELQRQRDLHKIKQLQQTVRDLESKDEVPGSRLHLGSARRAAGSDADHL
REQQRELEAMRQRLLSAARLLTSFTSQAVDRTVNDWTSSNEKAVMSLLHTLE
ELKSDLSRPTSSQKKMAAELQFQFVDVLLKDNVSLTKALSTVTQEKLELSRA
VSKLEKLLKHHLQKGCSPSRSESAWKPDETAPQSSLRPDPGRLPAAASEEA
HTSNVKMEKLYLHYLRAESFRKALIYQKKYLLLLIGGFQDSEQETLSMIAHLG
15 VFPSKAERKITSRPFTFRFRTAVRVVIAILRLRFLVKKWQEVDRKGALAQGKAP
RPGPRARQPQSPPTRESPTRDVPSGHTRDPARGRRLAAAASPHSGGRATPS
PNSRLERSLTASQDPEHSLTEYIHHLEVIQQRLGGVLPDSTSKKSCHPMIKQ

SEQ ID NO: 102

20 **Figure 45- Full-length Amino Acid Sequence (KPNA4)**

MADNEKLDNQRLKNFKNKGRDLETMRRQRNEVVVELRKNKRDEHLLKRRN
VPHEDICEDSDIDGDYRVQNTSLEAIVQNASSDNQGIQLSAVQAARKLLSSDR
NPPIDDLIKSGILPILVHCLERDDNPSLQFEAAWALTNIASGTSEQTQAVVQSNA
25 VPLFLRLLHSPHQNVCEQAVWALGNIIGDGPQCRDYVISLGVVKPLLSFISPSIP
ITFLRNVTWVMVNLCRHKDPPPPMETIQEILPALCVLIHHTDVNILDVTVWALS
YLTDAAGNEQIQMVIDSGIVPHLVPLLSHQEVKVQTAALRAVGNIVTGTDEQTQ
VVLNCDALSHFPALLTHPKEKINKEAVWFLSNITAGNQQQVQAVIDANLVPMII
HLLDKGDFGTQKEAAWAISNLTISGRKDQVAYLIQQNVIPPCNLLTVKDAQV
30 VQVVLDGLSNILKMAEDEAETIGNLIEECGGLEKIEQLQNHENEDIYKLAYEII
DQFFSSDDIDEDPSLVPEAIQGGTGFNSSANVPTEGFQF

SEQ ID NO: 103

Figure 46- Full-length Amino Acid Sequence (MAPKAP1)

35 MAFLDNPTIILAHIRQSHVTSDDTGMCEMVLIDHDVDLEKIHPPSMPGDSGSEI
QGSNGETQGYVYAQSVDITSSWDFGIRRRSNTAQRLERLRKERQNQIKCKNIQ
WKERNKQSAQELKSLFEKKSLKEKPPISGKQSILSVRLEQCPLQLNNPFNEYS
KFDGKKGHVGTATKKIDVYLPLHSSQDRLLPMTVVTMASARVQDLIGLICWQ
40 YTSEGREPKLNDNVSAyclhiaEDDGEVDTDfPPLDSNEPIHKFGFSTLALVEK
YSSPGLTSKESLFVRINAAGHGSliQVDNTKVTMKEILLKAVKRRKGSQKVSG
SRADGVFEEDSQIDIATVQDMLSSHYSKFKVSMIHRLRFTTDVQLGISGDKV
EIDPVTNQKASTKFWIKQKPIsIDSDLLCACDLAEEKSPSHAIFKLTyLSNHDY
KHLyFESDAATVNEIVLKVNyILESRASTARADYFAQKQRKLNRRTSFSFQKE
45 KKSGQQ

SEQ ID NO: 104

Figure 47- Full-length Amino Acid Sequence (mTPT1)

5 MIIYRDLISHDELFSDIYKIREIADGLCLEVEGKMVSRTEGAIDDSLIGGNASAE
GPEGEGTESTVVTGVDIVMNHHLQETSFTKEAYKKYIKDYMKSLKGKLEEQK
PERVKPFMTGAAEQIKHILANFNNYQFFIGENMNPDMVALLDYREDGVTPF
MIFFKDGLEMEKC

SEQ ID NO: 105

10 **Figure 48- Partial Amino Acid Sequence (mAK014397(679)) (SEQ ID NO: 105)**

QSRSRFQLNLDKTIESCKAQLGINEISEDVYTAVEHSDSEDSEKSESSDRXYVS
DEEQKPKNEPEDPEDKEGSRVDKEAPAIRKPKPTNQVEVKEEAKSNSPVSEK
PDTPAKDKASPEPEKDFVEKAKPSPHPTKDKLKGKDETDSPVHLGLDSDSE
15 SELVIDLGEDPSGREGRKNKDKPKVSPKQDAIGKPPPSSTSAGNQSPPETPVL
TRSATQAPAAAGVTVA AATTSTMSTVTVTAPATAVTGSPVKKQRLLPKETVP
AVQRVWNASSKFQTSSQKWHMQKIQRQQQQQQQQQQSQQQSQQQQPQSS
QGTRYQTRQAVKAVQQKEVTQSPSTSTITLVTSTQPAALVSSSGSASTLASAI
NADLPITASADVAADIAKYTSKMMDAIKGTMTEIYNDLSKNTTGSTIAEIRR
20 LRIEIEKLQWLHQQLAEMKHNLELTMAEMRQSLEQERDRLIAEVKKQLELE
KQQAVDETKKKQWCANCKKEAIFYCCWNTSYCDYPCQQAHWPEHMKST
QSATAPQQEADAEASTETGNKSSQGNSSNTQSAPSEPASAPKEKEAPAESKD
SSNSTLDLGSRETPSSMLLGSNQSSVSKRCDKQPAYTPTTTDHQPHPNYPAQ
KYHSRSSKAGLWSSSEEKRASSRSEHSGGTSTKNLMPKESRESRLDAFWD
25

SEQ ID NO: 106

Figure 49- Full-length Amino Acid Sequence (mHRMT1L1)

MEAPGEGPCSESQVIPVLEEDPVDYGCQMQLLDGAQLQLQPEEFVAIAD
30 YTATDETQLSFLRGEKILILRQTADWWGERAGCCGYIPANHLGKQLEEYD
PEDTWQDEEYFDSYGTLLHLEMLADQPRTTYHSHVILQNKESLKDVKILDV
GCGTGIISLFCAHHARPKAVYAVEASDMAQHTSQLVLQNGFADTITVFQKQVE
DVVLPEKVDVLVSEWMGTCLLFEFMIESILYARDTWLKGDGIIWPTTAALHLV
PCSAEKDYHSKVLFWDNAYEFNLSALKSLAIKEFFSRPKSNHILKPEDCLSEPC
35 TILQLDMRTVQVPDLETMRGELRFDIQKAGTLHGFTAWFSVYFQSLEEGQPQ
QVVSTGPLHPTTHWKQTLFMMDDPVPVHTGDVVHGFCCVTKKSGMEKAHV
CLSELGCHVRTRSHVSTELETGSFRSGGDS

SEQ ID NO: 107

40 **Figure 50- Full-length Amino Acid Sequence (HRMT1L1(241))**

MATSGDCPRSESQGEEPAECSEAGLLQEGVQPEEFVAIADYAATDETQLSFLRG
EKILILRQTADWWGERAGCCGYIPANHVKGHVDEYDPEDTWQDEEYFGS
YGTLKLHLEMLADQPRTTYHSHVILQNKESLTDKVIDLVGCGTGIISLFCAHY
45 ARPRAVYAVEASEMAQHTGQLVLQNGFADIITVYQKVEDVVLPEKVDVLVS
EWMGTCLLKQSSSEGDAKDDTTGVLDCCQTI

SEQ ID NO: 108

Figure 51- Partial Amino Acid Sequence (SAT(204))

50

RRGRSRETNEEPPPTVQVQGGPGPQREEKQKTKMAKFVIRPATAADCSDILRLI
KELAKY EYMEEQVILTEKDILLEDGFGEHPFYHCLVAEVPKEHWTPEGHSIVGF
AMYYFTYDPWIGKLLYLEDDFFVMSDYRGFGIGSEILKNLSQVAMRCRCSSMH
FLVAEWNEPSINFYKRRGASDLSSEEGWRLFKIDKEYLLKMATEE

5

SEQ ID NO: 109

Figure 52- Partial Amino Acid Sequence (BC023995(305))

10 FCELSSPAEMANVLCNRARLVSYLPGFCSLVKRVVNPKAFASTAGSSGSDESHV
AAAPPDICSRTVWPDETMGPFQDQRFQLPGNIGFDCHLNGTASQKKSLVH
KTLPDVLAEPSSERHEFVMAQYVNEFQGNDAPEVEQINS AETYFESARVECA
IQTCELLRKDFESLFPEVANGKLMILTVTQKTKNDMTVWSEEVEIEREVLL
KFINGAKEICYALRAEGYWADFIDPSSGLAFFGPYTNNTLFETDERYRHLGFSV
DDLGCCKVIRHSLWGTHVVVGSIFTNATPD SHIMKKLSGN

15

SEQ ID NO: 110

Figure 53- Full-length Amino Acid Sequence (TTN)

20 NH₂-MTTQAPTFTQPLQSVVVLEGSTATFEAHISGFPVPEVSWFRDGGVISTSTL
PGVQISFSDGRAKLTI PA VTKANSGRYSLKATNGSGQATSTAELLVKAETAPP
NFVQRLQSM TVRQGSQVRLQVRVTGIPTPVVKFYRDGAEIQSSLD FQISQEGD
LYSLIAEAYPEDSGTYSVNATNSVGRATSTAELLVQGE EEPVAKKTKTIVST
AQISESRQTRIEKKIEAHFDARS IATVEMVIDGAAGQQLPHKTPPRIPPKPSRS
PTPPSIAAKAQLARQQSPSPIRHSPSPVRHVRAPTSPSVRSVSPAARISTSPIRSV
25 RSPLLMRKTQASTVATGPEVPPWVKQEGYVASSSEAE MRETTLTSTQIRTEE
RWEGRYGVQEQTISGAAGAAASVSASASYAAEAVATGAKEVKQDADKSA
AVATVVA AVDMARVREPVISAVEQTAQRTTTTAVHIQPAQEQVRKEAEKTA
VTKVVVAADKAKEQELKSRTKEVITTKQE QMHVTHEQIRKETEKTFVPKVVI
SAAKAKEQETRIS EITKKQKQVTQEAIMKETRKT VVPKVIVATPKVKEQDLV
30 SRGREGITTKREQVQITQE KMRKEAEKTALSTIAVATAKAKEQETILRTRET
M ATRQEQIQVTHGKVDVGKKA EAVATVVA AVDQARVREPREPGHLEESYAQQ
TTLEYGYKERISA AKVAEPPQRPASEPHVVPKAVKPRVIQAPSETHIKTTDQK
GMHISSQIKKTTDLTTERLVHVDKRPR TASPHTVSKISVPKTEHGYEASIAGS
AIATLQKELSATSSAQKITKSVKAPT VKPSETRVRAEPTPLPQFPFADTPDTYK
35 SEAGVEVKKEVGVSITGTTVREERFEVLHGREAKVTETARVPAPVEIPVTPPT
LVSGLKNVTVIEGESVTLECHISGYPSPTVTWYREDYQIESSIDFQITFQSGIAR
LMIREAFAEDSGRFTCSAVNEAGTVSTSCYLAVQVSEEF EKETTAVTEKFTTE
EKRFVESRDVVM TDTSLTEEQAGPGEP AAPYFITKPVVQKLVEGGSVVFGCQ
VGGNPKPHVYWK KSGVPLTTGYRYKVSYNKQTGECKLVISM TFADDAGEYT
40 IVVRNKHGETSASASLLEEADYELLMKSQQEMLYQTQVTA FVQEPKVGETAP
GFVYSEYEKEYEKEQALIRKKMAKDTVVVRTYVEDQEFHISSFEERLIKEIEY
RIIKTTLEELLEEDGEEKMAVDISESEAVESGFDLRIKNYRILEGMGVTFHCKM
SGYPLPKIAWYKDGKRIKHGERYQMDFLQDGRASLRIPVVLPEDEGIYTA FAS
NIKGNAICSGKLYVEPAAPLGAPTYIPTLEPVSRI RSLSPRSVSRSPIRMSPARM
45 SPARMSPARMSPARMSPGRRLEETDESQLERLYKPVFVLKPV SFKCLEGQTA
RFDLKVVGRPMPETFWFHDGQQIVNDYTHKVVIKEDGTQSLIIVPATPSDSGE
WTVVAQNRAGRSSISVILTVEAVEHQVKPMFVEKLKNVNIKEGSRLEMKVRA
TGPNPNPDIVWLKNSDIIVPHKY PKIRIEGTKGEAALKIDSTVSQDSA WYTATAI
NKAGRDTTRCKVNVEVEFAEPEPERKLIIPRGTYRAKEIAAPELEPLHLRYGQ
50 EQWEEGDLYDKEKQKQPFKKKLTSLRLKRFGPAHFECRLTPIGDPTMVVEW

LHDGKPLEAANRLRMINEFGYCSLDYGVAYSRDSGIITCRATNKYGTDHTSA
TLIVKDEKSLVEESQLPEGRKGLQRIEELERMAHEGALTGVTTDQKEKQKPD
VLYPEPVRVLEGETARFRCRVGTGYPQPKVNWYLNQGLIRKSKRFRVRYDGIH
YLDIVDCKSYDTGEVKVTAENPEGVIEHKVKLEIQQREDFRSVLRRAPEPRPE
5 FHVHEPGKLQFEVQKVDRPVDTTETKEVVKLKRAERITHEKVPEESEELRSKF
KRRTEEGYYEAITAVELKSRKKDESYEELLRKTDELLHWTKELTTEEKKAL
AEEGKITIPTFKPKIELSPSMEAPKIFERIQSQTVGQGSDAHFRVRVVGKPDPE
CEWYKNGVKIERSDRIYWYPEDNVCELVIRDVTAEDSASIMVKAINIAGET
SSHAFLLVQAKQLITFTQELQDVVAKEKDTMATFECETSEPFVKVKWYKDG
10 MEVHEGDKYRMHSDRKVHFLSILTIDTSDAEDYSCVLVEDENVKTTAKLIVE
GAVVEFVKELQDIEVPESYSGELECIVSPENIEGKWYHNDVELKSNGKYTITS
RRGRQNLTVKDVTKEDQGEYSFVIDGKKTCKLKMKPRPIAILQGLSDQKVC
EGDIVQLEVKVSLESVEGVWMKDGQEVQPSDRVHIVIDKQSHMLLIEDMTKE
DAGNYSFTIPALGLSTSGRVSVYSVDVITPLKDVNVIEGTKAVLECKVSPDV
15 TSVKWYLNDEQIKPDDRQVAIVKGTKQRLVINRTHASDEGPYKLIVGRVETN
CNLSVEKIKIIRGLRDLTCTETQNVVFEVELSHSGIDVLWNFKDKEIKPSSKYKI
EAHGKIYKLTVLNMMKDDDEGKYTFYAGENITSGKLTVAGGAISKPLTDQTV
ESQEAVFCEVANPDSKGEWLRDGHPLTNNIRSESDGHKRRLLIAATKLDD
IGEYTYKVATSKTSALKKVEAVKIKKTLKNLTVTETQDAVFTVELTHPNVKG
20 VQWIKNGVVLESNEKYAISVKGTIYSLRIKNCAIVDESVYGFRLGRLGASARL
HVETVKIHKPKDVTALENATVAFEVSVSHDTPVPKWFHKSVEIKPSDKHRL
VSEKRVHKLMLQNISPSDAGEYTA VVGQLECKAKLFVETLHITKTMKNIEVP
ETKTASFECEVSHFNVPMSWLKNGVEIEMSEKFKIVVQGKHLHQLIIMNTSTED
SAEYTFVCGNDQVSATLTVTPIMITSMLKDINAEEKDTITFEVTVNYEGISYK
25 WLKNGVEIKSTDKCQMRKTLTHSLNIRNVHFGDAADYTFVAGKATSTATL
YVEARHIEFRKHIKDIKVLEKKRAMFECEVSEPDITVQWMKDDQELQITDRIK
IQKEYVHRLIPSTRMSDAGKYTVVAGGNVSTAKLFVEGRDVRIRSIKKEVQ
VIEKQRAVVEFEVNEDDVAHWYKDGIEINFQVQERHKYVVERRIHRMFISE
TRQSDAGEYTFVAGRNRSSVTLYVNAPEPPQVLQELQPVTVQSGKPARFCV
30 ISGRPQPKISWYKEEQLLSTGFKCKFLHDGQEYTLLEAFPEDAAVYTCEAK
NDYGVATTASLSVEVPEVVSQDQEMPVYPPAHTPLQDVTVTSEGQPARFQCR
VSGTDLKVSWSYKDKKIKPSRFFRMTQFEDTYQLEIAEAYPEDEGTYTFVASN
AVGQVSSTANLSLEVQALDRQSSGKDVESTKSQAVADSSFTKEESKISQKEI
KSFQGSSEYEVQVFESVSQSSIHTAASVQDTQLCHTASLSQIAESTELSKECA
35 KESTGEAPKIFLHLQDVTVKCGDTAQFLCVLKDDSFIDVTWTHEGAKIEESER
LKQSQNGNIQFLTICNVQLVDQGLYSCIVHNDGERTTSAVLSVEGAPESILHE
RIEQEIEMEMKEFSSSFLSAEEGLHSAELQLSKINETLELLSESPVYSTKFDSE
KEGTGPIFIKEVSNADISMGDVATLSVTVIGIPKPKIQWFFNGVLLTPSADYKF
VFDGDDHSLIILFTKLEDEGEYTCMASNDYGKTICSAYLKINSKGEGHKDTET
40 ESAVAKSLEKLGGPCPPHFLKELKPIRCAQGLPAIFEYTVVGEPAPTVTWFK
NKQLCTSVYYTIIHNPNNGSGTFIVNDPQREDSGLYICKAENMLGESTCAAELL
VLLEDTDMTDTPCAKSTPEAPEDFPQTPLKGPAVEALDSEQEIATFVKDTIL
KAALITEENQQLSYEHIAKANELSSQLPLGAQELQSILEQDKLTPESTREFLCIN
GSIHFQPLKEPSPNLQLQIVQSQKTFKEGILMPEEPETQAVLSDTEKIFPSAMSI
45 EQINSLTVEPLKTLAEPEGNYPPQSSIEPPMHSYLTSAEEVLSPKEKTVSDTN
REQRVTLQKQEAQSALILSQSLAEGHVESLQSPDVMISQVNYEPLVPSEHSCT
EGGKILIESANPLENAGQDSAVRIEKGSLRFLALEEKQVLLKEEHSDNVVM
PPDQIIESKREPVAIKKVQEVQGRDLLSKESLLSGIPEEQRLNLKIQICRALQAA
VASEQPGLFSEWLRNIEKVEVEAVNITQEPRHIMCMYLVTSAKSVTEEVTIII
50 DVDPQMANLKMELRDALCAIIEEIDILTAEGPRIQQGAKTSLQEEMDSFSGS

QKVEPITEPEVESKYLISTEEVSFNVQSRVKYLDATPVTKGVASAVVSDEKQ
DESLKPSEEKEESSSESGETEEVATVKIQEAEGGLIKEDGPMIHTPLVDTVSEEG
DIVHLTTSITNAKEVNWYFENKLVPSDEKFKCLQDQNTYTLVIDKVNTEDHQ
GEYVCEALNDSGKTATSAKLTVVKRAAPVIKRIEPLVALGHLAKFTCEIQS
5 APNVRFQWFKAGREIYESDKCSIRSSKYISSLEILRTQVVDCGEYTCKASNEYG
SVSCTATLTVTPGGEEKVRKLLPERKPEPKEEVVLKSVLRKRPEEEEPKVEP
KKLEKVKKPAVPEPPPPKPVEEVEVPTVTKRERKIEPTKVPEIKPAIPLPAPEP
KPKPEAEVKTIKPPPVEPEPTPIAAPVTVPVVGKKAEEKAPKEEAAKPKGPIKG
VPKKTSPSIEAERRKLPGSGGEKPPDEAPFTYQLKAVPLKFVKEIKDIILTESE
10 FVGSSAIFECLVSPSTAITTWMKDGSNIRESPKHRFIADGKDRKLHIIDVQLSD
AGEYTCVLRRLGNKEKTSTAKLVVEELPVRVFKTLEEEVTVVKGQPLYLSCEL
NKERDVVWRKDGKIVVEKPGRIVPGVIGLMRALTINDADDDTAGTYTVTVE
NANNLECSSCVKVVEVIRDWLVKPIRDQHVKPKGTAIFACDIAKDTPNIKWF
KGYDEIPAEPNDKTEILRDGNHLYLKIKNAMPEDIAEYAVEIEGKRYPAKLT
15 GEREVELLKPIEDVTIYEKESASFDAEISEADIPGQWKLKGELLRPSPTCEIKAE
GGKRFLT LHKVKLDQAGEVLYQALNAITTAILTVKEIELDFAVPLKDVTVPER
RQARFECVLTREANVIWSKGPDIKSSDKFDIADGKKHILVINDSQFDDEGVY
TAEVEGKKTSARLFVTGIRLKFMSPLEDQTVKEGETATFVCELSHEKMHVWV
FKNDAKLHTSRTLISSEGKTHKLEMKEVTLDISQIKAQVKELSSTAQLKVL
20 EADPYFTVKLHDKTAVEKDEITLKCEVSKDVPVKWFKDGEEIVPSPKYSIKAD
GLRRILKIKKADLKDKEGYVCDGCTDKTKANVTVEARLIKVEKPLYGVEVVF
GETAHFEIELSEPDVHGQWKLKGQPLTASPDCEIIEDGKKHILHNCQLGMT
GEVSFQAANAKSAANLKVKEPLIFITPLSDVKVFEKDEAKFECEVSREP KTR
WLKGTQEITGDDRFELIKDGT KHS MVIKSAAFEDAEKYMFEAEDKHTSGKLI
25 EGIRLKF LTP LKDVTAKEKESAVFTVELSHDNIRVKWFKNDQRLHTTRSVSM
QDEGKTHSITFKDLSIDDTSQIRVEAMGMSSEAKLTVLEGDPYFTGKLQDYTG
VEKDEVILQCEISKADAPVKWFKDGKEIKPSKNAV KADGKKRMLILKKALK
SDIGQYTCDCGTDKTSGLKDIEDREIKLVRPLHSVEVMETETARFETEISED
HANWKLKGEALLQTPDCEIKEEGKIHSVLHNCRLDQTGGVDFQAANVKSS
30 AHLRVKPRVIGLLRPLKDVTVTAGETATFDCELSYEDIPVEWYLGKKLEPSD
KVVPRSEGVHTLTLRDVKLEDAGEVQLTAKDFKTHANLFVKEPPVEFTKPL
EDQTVEEGATAVLECEVSRENAKVKWFKNGTEILKSKYEIVADGRVRKLVI
HDCTPEDIKTYTCDAKDFKTS CNLNVPPHVEFLRPLTDLQVREKEMARFEC
ELSRENAKVKWFKDGAEIKKGKKYDIISKGAVRILVINKCLLDDEAEYSCEVR
35 TARTSGMLTVLEEEAVFTKNLANIEVSETDTIKLVCEVSKPGAEEVIWYKGDEE
IETGRYEILTEGRKRLVIQNAHLEDAGNYNCRPLSSRTDGKVKVHELAAEFI
SKPQNLEILEGEKA E FVCSISKESFPVQWKRDDKTLES GDKYDVIADGKKRVL
VVKDATLQDMGTYYVMVGAAARAAHLTVIEKL RIVVPLKDTRVKEQQEVV
FNCEVNTEGAKAKWFRNEEAIFDSSKYIILQKDLVYTLRIRDAHLDDQANYN
40 VSLTNHRGENVKSAANLIVEEEDLRIVEPLKDIETMEKKS VTFWCKVNRLNV
TLKWTKN GEEV PFDNRVSYRVDKYK HMLTIKDCGFPDEGEYIVTAGQDKSV
AELLII EAPTEFVEHLEDQTVTEFDDAVFSCQLSREKANVKWYRNGREIKEGK
KYKFEKDGSIHRLI IKDCRLDDECEYACGVEDRKSARLFVEEIPVEIIRPPQDI
LEAPGADVFLAELNKDKVEVQWLRNNM VVVQGD KHQMMSEGIHRLQIC
45 DIKPRDQGEYRFIAKDKEARAKLELAAAPKIKTADQDLVVDVGKPLTMVVPY
DAYPKAEAEWFKENEPLSTKTIDTTAEQTSFRILEAKKGDKGRYKIVLQNKH
GKAEGFINLKVIDVPGPVRNLEVTETFDGEVSLAWEEPLTDGGSKIIGYVVER
RDIKRKTWVLATDRAESCEFTVTGLQKGGVEYLFRVSARNRVGTGEPVETDN
PVEARSKYDVPGPPLNVTITDVNRFGVSLTWEPPEYDGGAEITNYVIELRDKT
50 SIRWDTAMTVRAEDLSATVTDVVEGQEYSFRVRAQNRIGVGKPSAATPFVKV

ADPIERPSPPVNLTSSDQTQSSVQLKWEPLKDGGSPILGYYIERCEEKDNWIR
CNMKLVPELTYKVTGLEKGNKYLYRVSAENKAGVSDPSEILGPLTADDAFVE
PTMDLSAFKDGLEVIVPNPITILVPSTGYPRPTATWCFGDKVLETGDRVKMKT
LSAYAELVISPERSDKGIYTLKLENRVKTISGEIDVNVIAFPSAPKELKFGDIT
5 KDSVHLTWEPPDDDDGGSPLTGYVVEKREVSRTWTKVMDFVTDLEFTVPDL
VQGKEYLKFVCARNKCGPGEPAYVDEPVNMSTPATVPDPPENVKWRDRTAN
SIFLTWDPPKNDGGSRIKGYIVERCPRGSDKWVACGEPVAETKMEVTGLEEG
KWYAYRVKALNRQGASKPSRPTEEIQAVDTQEAPEIFLDVKLLAGLTVKAGT
KIELPATVTGKPEPKITWTKADMILKQDKRITIENVPKKSTVTIVDSKRSDTGT
10 YIIHAVNVCGRATAVVEVNVLDKPGPPAAFDITDVTNESCLLTWNPPRDDGG
SKITNYVVERRATDSEVWHKLSSTVKDTNFKATKLIPNKEYIFRVAENMYG
VGEPVQASPITAKYQFDPPGPPTLRLEPSDITKDAVTLTWCEPDDDDGGSPTGY
WVERLDPDTDKWVRNKMVPVKDTTYRVKGLTNKKKYRFRVLAENLAGPGK
PSKSTEPILIKDPIDPPWPPGKPTVKDVGKTSVRLNWTKEHDGGAKIESYVIE
15 MLKTGTDEWVRVAEGVPTTQHLLPGLMEGQEYSFRVRAVNKAGESESEPS
DPVLCREKLYPPSPRWLEVINITKNTADLKWTVPEKDGGSPITNYIVEKRDV
RRKGWQTVDTTVKDTKCTVPLTEGSLYVFRVAAENAIGQSDYTEIEDSVLA
KDTFTTPGPPYALAVVDVTKRHVDLKWEPPKNDGGRPIQRYVIEKKERLGTR
WVKAGKTAGPDCNFRVTDVIEGTEVQFQVRAENEAGVGHPSEPTIELSIEDPT
20 SPPSPPLDLHVTDAGRKHIAIAWKPEKNGGSPYIHYVEMCPVGTEKWMRV
NSRPIKDLKFKVEEGVVPDKEYVLRVRAVNAIGVSESEISENVVAKDPDCKP
TIDLETHDIIVIEGEKLSIPVPFRAVPVPTVSWHKDGKEVKASDRLTMKNDHIS
AHLEVPKSVRADAGIYTITLENKLGSATASINVKVIGLPGPCKDIKASDITKSSC
KLTWEPPEFDGGTPILHYVLERREAGRRTYIPVMSGENKLSWTVKDLIPNGEY
25 FFRVKA VNKVGGGEYIELKNPVIAQDPKQPPDPPVDVEVHNPTAEAMTITWK
PPLYDGGSKIMGYIIEKIAKGEERWKRCNEHLVPILTYTAKGLEEGKEYQFRV
RAENAAGISEPSRATPPTKA VDPIDAPKVILRTSLEVKRGDEIALDASISGSPYP
TITWIKDENVIVPEEIKKRAAPLVRRRKGEVQEEEPFVLPLTQRLSIDNSKKGE
SQLRVDRSLRPDHGLYMIKVENDHGIAPCTVSVLDTPGPPINFVFEDIRKTS
30 VLCKWEPLDDGGSEIINYTLEKKDKTKPDSEWIVVTSTLRHCKYSVTKLIEG
KEYLFRVRAENRFGPGPPCVSKPLVAKDPFGPPDAPDKPIVEDVTSNSMLVK
WNEPKDNGSPILGYWLEKREVNSTHWSRVNKSLLNALKANVDGLLEGLTYV
FRVCAENAAGPGKFSPPSPKTAHDPISPGPPPIRVTDTSSTTIELEWEPPAFN
GGGEIVGYFVDKQLVGTNEWSRCTEKMIKVRQYTVKEIREGADYKLRVSAV
35 NAAGEGPPGETQPVTVAEPQEPPAVELDVSVKGGIQIMAGKTLRIPAVVTGRP
VPTKVWTKEEGELDKDRVVIDNVGKSELIIKDALKDHGRYVITATNSCGS
KFAAARVEVFDPGPVLDLKPVVTNRKMCLLNWSDPEDDDGGSEITGFIERK
DAKMHTWRQPIETERSKCDITGLLEGQEYKFRVIAKNKFGCGPPVEIGPILAV
DPLGPPTSPERLTYTERTKSTITLDWKEPRSNGGSPYIIEKRRHDKPDFERV
40 NKRLCPTTSFLVENLDEHQMYEFRVKA VNEIGESEPSLPLNVVIQDDEVPPTIK
LRLSVRGDTIKVKAGEPVHIPADVTGLPMPKIEWSKNETVIEKPTDALQITKEE
VSRSEAKTELSIPKAVREDKGTYYTVTASNRLGSVFRNVHVEVYDRPSPRNLA
VTDIKAESCYLTWDAPLDNGGSEITHYVIDKRDASRKA EWEEVTNTAVEKR
YGIWKLIPNGQYEFVRVAVNKYGISDECKSDKVVIQDPYRLPGPPGKPKVLAR
45 TKGSM LVSWTPPLDNGGSPITGYWLEKREEGSPYWSRVSRAPITKVGLKGVE
FNVPRLLLEGVKYQFRAMAINAAGIGPPSEPSDPEVAGDPIFPPGPPSCPEVKDK
TKSSISLGWKPPAKDGGSPIKGYIVEMQEEGTTDWKRVNEPDKLITCECVVP
NLKELRKYRFRVKA VNEAGESEPSDTTGEIPATDIQEEPEVFIDIGA QDCLVCK
AGSQIRIPAVIKGRPTPKSSWEFDGKAKKAMKDGVDIPEDAQLETAENSSVII
50 IPECKRSHTGKYSITAKNKAGQKTANCRVKVMDVPGPPKDLKVS DITRGSCR

LSWKMPDDDDGGDRIKGYVIEKRTIDGKA WTKVNPDCGSTTFVVPDLLSEQQ
YFFRVRAENRFGIGPPVETIQRTTARDPIYPPDPPIKLIKGLITKNTVHLSWKPP
KNDGGSPVTHYIVECLAWDPTGTTKEAWRQCNKRDVEELQFTVEDLVEGGE
YEFRVKAVNAAGVSKPSATVGPCDCQRPDMPPSIDLKEFMEVEEGTNVNIVA
5 KIKGVFPPTLTWFKAPPKKPDNKEPVLYDTHVNKL VVDDTCTLVIPQSRRSDT
GLYTITAVNNLGTASKEMRLNVLGRPGPPVGPVKFESVSADQMTLSWFPPKD
DGGSKITNYVIEKREANRKTWVHVSSEPKECTYTIPKLLEGHEYVFRIMAQNK
YGIGEPLDSEPETARNLFSVPGAPDKPTVSSVTRNSMTNVNWEPEYDGGSPVT
GYWLEMKDTSKRWKRVNRDPIKAMTLGVSYKVTGLIEGSDYQFRVYAINA
10 AGVGPASLPSDPATARDPIAPPGPPFPKVTDWTKSSADLEWSPPLKDGGSKVT
GYIVEYKEEGKEEWEKGDKEVRGTKLVVTGLKEGAFYKFRVSAVNIAGIGE
PGEVTDVIEMKDRLVSPDLQLDASVRDRIVVHAGGVIRIIAYVSGKPPPTVTW
NMNERTLPQEATIIETTAISSSMVIKNCQRSHQGVYSLAKNEAGERKKTIIVD
VLDVPGPVGTPFLAHNLTNESCKLTWFSPEDDGGSPITNYVIEKRESRRRAWT
15 PVTYTVTRQNATVQGLIQGKAYFFRIAAENSIGMGPFVETSEALVIREPITVPE
RPEDLEVKEVTKNVTTLTNWPPKYDGGSEIINYVLESRLIGTEKFHKVTNDNL
LSRKYTVKGLKEGDTYEYRVSANIVGQGKPSFCTKPITCKDELAPPTLHLD
RDKLTIRVGEAFALTGRYSGKPKPKVSWFKDEADVLEDDRTHIKTTPATLAL
EKIKAKRSDSGKYCVVENSTGSRKGFCQVNVVDRPGPPVGPVSFDEVTKDY
20 MVISWKPLDDGGSKITNYIIEKKEVGKDVWMPVTSASAKTTCKVSKLLEGK
DYIFRIHAENLYGISDPLVSDSMKAKDRFRVPDAPDQPIVTEVTKDSALVTWN
KPHDGGKPITNYILEKRETMSKRWARVTKDPIHPYTKFRVPDLLEGQCYEFRV
SAENEIGIGDPSPPSKPVFAKDPIAKPSPPVNPEAIDTTCNSVDLTWQPPRHG
GSKILGYIVEYQKVGDEEWRRANHTPESCPETKYKVTGLRDGQTYKFRVLAV
25 NAAGESDPAHVPEPVLVKDRLEPPELILDANMAREQHIKVGDTLRLSAIIKGV
PFPKVTWKKEDRDAPTKARIDVTPVGSKLEIRNAAHEDGGIYSLTVENPAGSK
TVSVKVLVLDKPGPPRDLEVSEIRKDSCYLTWKEPLDDGGSVITNYVVERRD
VASAQWSPLSATSKKKSHFAKHLNEGNQYLFRVAAENQYGRGPFVETPKPIK
ALDPLHPPGPPKDLHHVDVDKTEVSLVWNKPDRDGGSPITGYLVEYQEEGTQ
30 DWIKFKTVTNLECVVTGLQQGKTYRFRVKAENIVGLGLPDTTIPIECQEKLP
PSVELDVKLIEGLVVKAGTTVRFPPIIRGVPVPTAKWTTDGGSEIKTDEHYTVET
DNFSSVLTIKNCLRRDTGEYQITVSNAAGSKTVAVHLTVLDVGPPTGPINILD
VTPEHMTISWQPPKDDGGSPVINIYVEKQDTRKDTWGVVSSGSSKTKLKIPLH
QKGCHEYVFRVRAENKIGVGPPLDSTPTVAKHKFSPPSPGKPVVTDITENAAT
35 VSWTLPKSDGGSPITGYMERREVTGKWVRVNKTPIADLKFRVTGLYEGNT
YEFRVFAENLAGLSKSPSSDPIACRPIKPPGPPINPKLKDKSRETADLVWTK
PLSDGGSPILGYVVECQKPGTAQWNRINKDELIRQCAFRVPGLIEGNEYRFRIK
AANIVGEGEPRELAESVIAKDILHPPEVELDVTCDVITVRVGQTIRILARVKG
RPEPDITWTKEGKVLVREKRVDLIQDLPRVELQIKEAVRADHGKYIISAKNSS
40 GHAQGSIAVNVLD RPPGQCQNLKVTNVTKENCTISWENPLDNGGSEITNFIVEY
RKPNNQKGSIVASDVTKRLIKANLLANNEYFRVCAENKVGVGPTIETKTPIL
AINPIDRPGEPENLHIADKGKTFVYLKWRPDPYDGGSPNLSYHVERRLKGSD
DWERVHKGSIKETHYMVDRCVENQIYEFVRVQTKNEGGESDWVKTEEVVKE
DLQKPVLDLKLSGVLTVKAGDTIRLEAGVRGKPFPEVAWTKDKDATDLTRSP
45 RVKIDTRADSSKFSLTAKRSDGGKYVVTATNTAGSFVAYATVNVLDKPGPV
RNLKIVDVSSDRCTVCWDPPEDDGGCEIQNYILEKCETKRMVWSTYSATVLT
PGTTVTRLIEGNEYIFRVRAENKIGTGPPTESKPVIAKTKYDKPGRPDPEVTK
VSKEEMTVVWNPPEYDGGKSITGYFLEKKEKHSTRWVPVNKSAIPERRMKV
QNLLPDHEYQFRVKAENEIGIGEPSLSPRPVVAKDPIEPPGPPTNFRVVDTTKH
50 SITLGWGPVYDGGAPIIGYVEMRPKIADASPDEGWKRCNAAAQLVRKEFT

VTSLDENQEYEFVRVCAQNQVGIGRPAELKEAIKPKEILEPPEIDL DASMRLVI
VRAGCPIRLFAIVRGRPAKVTWRKV GIDNVVRKGQVDLVD TMAFLVIPNST
RDDSGKYS LTLVNPAGEKA VFNVRVLDTPGPVSDLKVSDVT KTSCHVSWA
PPENDGGSQVTHYIVEKREADRKTWSTVTPEVKKTSFHVTNLVPGNEY YFRV
5 TAVNEYGPGVPTDVPKPVLASDPLSEDP PRKLEVTEMTKNSATLAWLPPLR
DGGAKIDGYITSYREEEQPADRWTEYSVVKDLSLVVTGLKEGKKYKFRVAA
RNAVGVS LPPREAEGVYEAKEQLLPKILMPEQITIKAGKKLR IEAHVYGKPHP
TCKWKKGEDEVVTSSHLAVHKADSSSILIKDVTRKDSGYYS LTAENSSGTD T
QKIKVVVM DAPGPPQPPFDISDIDADACSLSWHIPLEDGGSNITNYIVEKCDVS
10 RGDWVTALASVTKTSCRVGKLIPGQEYIFRVRAENRFGISEPLTSPKMVAQFP
FGVPSEPKNARVTKNKDCIFVAWDRPDS DGGSPIIGY LIERKERN SLLWVKA
NDTLVRSTEYPCAGLVEGLEYSFR IYALNKAGSSPPSKPTEYVTARMPVDPPG
KPEVIDVTKSTVSLIWARPKHDGGSKIIGYFVEACKLP GDKWVRCNTAPHQIP
QEEYTATGLEEKAQYQFRAIARTAVNISPPSEPSDPVTILAENVP PRIDLSVAM
15 KSLITVKAGTNVCLDATVFGKPMPTVSWKKDGTLLKPAEGIKMAMQRNLCT
LELFSVNRKDSGDYTITAENSSGSKSATIKLVLDKPGPPASVKINKMYSDRA
MLSWEPPLEDGGSEITNYIVDKRETSRPNWAQVSATVPITSCSVEK LIEGHEY
QFRICAENKYGVGDPVFTEPAIAKNPYDPPGRCDPPVISNITKDHMTVSWKPP
ADDGGSPITGYLLEKRETQAVNWTKNVRKPIIERTLKATGLQEGTEYEF RVTA
20 INKAGPGKPSDASKAAYARDPQYPPAPPAFPKVYDTTRSSVSLSWGKPAYDG
GSPHIGYLVEVKRADSDNWVRCNLPQNLQKTRFEVTGLMEDTQYQFRVYAV
NKIGYSDPSDVPDKHYPKDILIPPEGELDADLRKTLILRAGVTMRLYVPVKGR
PPPKITWSKPNVNLDRIGLDIKSTDFDTFLRCENVNKYDAGKYILTLENSCG
KKEYTIVVKVLDTPGPPVNVTVKEISKDSAYVTWEPPIIDGGSPIINYV VQKRD
25 AERKSWSTVTTECSKTSFRVANLEEGKSYFFRVFAENEY GIGDPGETRDAVK
ASQTPGPVVDLKVRSVSKSSCSIGWKKPHSDGGSRIIGYVVD FLTEENKWQR
VMKSLSLQYS AKDLTEGKEYTFRVSAENENGEGTPSEITVVARDDV VAPDLD
LKGLPDL CYLAKENS NFRLKIPIKGKPAPSVSWKKGEDPLATDTRVSVESSAV
NTTLIVYDCQKSDAGKYTITLKNVAGTKEGTISIKVVGKPGIPTGPIKFDE VTA
30 EAMTLKWAPPKDDGGSEITNYILEKRDSVNNKWVTCASAVQKT TFRVTRLH
EGMEYTFRVSAENKYGVGEGLKSEPIVARHPFDVPDAPPPPNIVDVRHDSVSL
TWTDPKKTGGSPITGYHLEFKERN SLLWK RANKTPIRMRDFKVTGLTEGLE Y
EFRVMAINLAGVGKPSLPSEPVVALDPIDPPGKPEVINITRNSVT LIWTEPKYD
GGHKL TGYIVEKRDLP SKSWMKANHVNVPECAFTVTDLVEGGKYEFRIRAK
35 NTA GAISAPSESTETIICKDEYEAPTIVLDPTIKDGLTIKAGDTIVLNAISILGKPL
PKSSWSKAGKDIRPSDITQITSTPTSSMLTIKYATR KDAGEYTITATNPFGTKVE
HVKVTVLDVPGPPGPVEISNVSAEKATLTWTPPLEDGGSPIKSYILEKRETSRL
LWTVVSEDIQSCRHVATKLIQGNEYIFRVSAVNHYGKGEPVQSEPVKMVDRF
GPPGPPEKPEVSNVTKN TATVSWKRPVDDGGSEITGYHVERREKKSLRWVRA
40 IKTPVSDLRCKVTGLQEGSTYEF RVSAENRAGIGPPSEASDSVLMKDAA YPPG
PPSNPHVTDTTKKSASLAWGKPHYDGGLEITGYVVEHQKVGDEAWIKDTTG
TALRITQFVVPDLQTK EKYNFRISAINDAGVGEPVIPDVEIVEREMAPDFELD
AELRRTL VVRAGLSIRIFVPIKGRPAPEVTWTKDNINLKNRANIENTESFTLLIIP
ECNRYDTGKFVMTIENPAGKKSGFVNVRVLDTPGPVLNLRPTDITKDSVTLH
45 WDLPLIDGGS RITNYIVEKREATRKSYS TATTCKCHKCTYKVTGLSEGCEYFFR
VMAENEY GIGEPTETTEPVKASEAPSPDSL NIMDITKSTVSLAWPKPKHDGG
SKITGYVIEAQRK GSDQWTHITTVKGLECVVRNLTEGEEYTFQVMAVNSAGR
SAPRESRPVIVKEQTMLPELDLRGIYQKLVI AKAGDNIKVEIPVLGRP KPTVTW
KKGDQILKQTQRVNFETTATSTILNINECVRS DSGPYPLTARNIVGEVGDVITI
50 QVHDIPGPPTGPIKFDEVSSDFVTF SWDPPENDGGVPISNYV VEMRQTDSTTW

VELATTVIRTTYKATRLTTGLE YQFRVKAQNR YGVGPGITSACIVANYPFKVP
GPPGTPQVTA VTKDSMTISWHEPLSDGGSPILGYHVERKERN GILWQTVSKAL
VPGNIFKSSGLTDGIA YEFRVIAENMAGKSKPSKPSEPMLALDPIDPPGKPVPL
NITRHTVTLK WAKPEYTG GFKITSYIVEKRDLPNGRWL KANFSNILENEFTVS
5 GLTEDAAYEFRVIAKNAAG AISPPSEPSDAITCRDDVEAPKIKVDVKFKDTVIL
KAGEAFRLEADVSGRPPPTMEW SKDGKELEGTA KLEIKIADFSTNLVNKDST
RRDSGAYTLTATNPGGFAKHIFNVKVLDRPGPPEGPLAVTEVTSEKCVLSWFP
PLDDGGAKIDHYIVQKRETSRLAWTNVASEVQVTKLKVTKLLKGNEYIFRVM
AVNKYGVGEPLESEPVLA VNPYGPDPKPNPEVTTITKDSMVVCWGHPSDGG
10 GSEIINYIVERRDKAGQRWIKCNKKTLDLRYKVSGLTEGHEYEFRI MAENAA
GISAPSPSPFYKACDTVFKPGPPGNPRVLDTSRSSISIAWNKPIYDGGSEITGY
MVEIALPEEDEWQIVTPPAGLKATSYTITGLTENQEYKIRIYAMNSEGLGEPAL
VPGTPKAEDRMLPPEIELDADLRKVVTIRACCTLRLFVPIKGRPAPEVKWARD
HGESLDKASIESTSSYTLLIVGNVNRFD SGKYILTVENSSGSKSAFVNVRVLDT
15 PGPPQDLKVKEVTKTSVTLTWDPPLDGGSKIKNYIVEKRESTRKAYSTVATN
CHKTSWKVDQLQEGCSYYFRVLAENEYGIGLPAETAESVKASERPLPPGKITL
MDVTRNSVSLSWEKPEHDGGSRLGYIVEMQTKGSDKWATCATVKVTEATIT
GLIQGEEYSFRVSAQNEKGISDPRQLSVPVIAKDLVIPPAFKLLFNTFTVLAGE
DLKVDVPFGRPTPAVTWHKDNVPLKQTTTRVNAESTENNSLLTIKDACREDV
20 GHYVVKL TNSAGEAIETLNVIVLDKPGPPTGPVKMDEV TADSITLSWGPPKY
DGGSSINNYIVEKRDSTTTWQIVSATVARTTIKACRLKTGCEYQFRIA AENR
YGKSTYLNSEPTVAQYPFKVPGPPGTPVVTLSSRDSMEVQWNEPISDGGSRVI
GYHLERKERN SILWVKLNKTPIPQTKFKTTGLEEGVEYEF RVSAENIVGIGKPS
KVSECYVARDPCDPPGRPEAIIVTRNSVTLQWKKPTYDGGSKITGYIVEKKEL
25 PEGRWMKASFTNIIDTHFEVTGLVEDHRYEFRV IARNAAGVFSEPS ESTGAITA
RDEVDPPRISMDPKYKDTIVVHAGESFKVDADIY GKPIPTIQWIKGDQELSNT
ARLEIKSTDFATSLSVKDAVRVDSGNYILKAKNVAGERSVT VNVKVLDRPGP
PEGPVVISGVTA EKCTLA WKPPLQDGGSDIINYIVERRETSRLVWTVVDANVQ
TLCKVTKLLEGNEYTFRIMAVNKYGVGEPLESEPVVAKNPFVVPDAPKAPE
30 VTTVTKDSMIVVWERPASDGGSEILGYVLEKRDKEGIRWTRCHKRLIGELRL
RVTGLIENHDYEF RVSAENAAGLSESPPSA YQKACDPIYKPGPPNPKVIDIT
RSSVFLSWSKPIYDGGCEIQGYIVEKCDVSVGEWTMCTPPTGINKTNIEVEKLL
EKHEYNFRICA INKAGVGEHADVPGPPIVEEKLEAPDIDL DLELRKIINIRAGGS
LRLFVPIKGRPTPEVKWGKVDGEIRDA AIIDVTSSFTSLVLDNVNRYDSGKYT
35 LTLNSSGTKSAFVTVRVLDTPSPPVNLKVTEITKDSVSITWEPPLDGGSKIK
NYIVEKREATRKS YAAVVTNCHKNSWKIDQLQEGCSYYFRVTAENEYGIGLP
AQTADPIKVAEVPQPPGKITVDDVTRNSVSLSWTKPEHDGGS KIIQYIVEMQA
KHSEKWSECARV KSLQAVITNL TQGEYLF RVVAVNEKGRSDPRSLAVPIVA
KDLVIEPDVKPAFSSYSVQVGQDLKIEVPISGRPKPTITWTKDGLPLKQTTTRIN
40 VTDSLDTLTL SIKETHKDDGGQYGITVANVVGQKTASIEIVTLDKPDPPKGPV
KFDDVSAESITLSWNPPLYTGGCQITNYIVQKRD TTTTVWDVVSATVARTTL
KVTKLKTGTEYQFRIFAENRYGQSFALES DPIVAQYPYKEPGPPGTPFATAISK
DSMVIQWHEPVNNGGSPVIGYHLERKERN SILWTKVNKTIHDTQFKAQ NLEE
GIEYEF RVYAENIVGVGKASKNSECYVARDPCDPPGTPEPIMVKRNEITLQWT
45 KPVDYDGGSMITGYIVEKRDLPDGRWMKASFTNVIETQFTVSGLTEDQRYEFR
VIAKNAAGAI SKPSDSTGPITAKDEVELPRISMDPKFRDTIVVNAGETFRLEAD
VHGKPLPTIEWLRGDKEIEESARCEIKNTDFKALLIVKDAIRIDGGQYILRASN
VAGSKSFPVNVKVLDRPGPPEGPVQVTGVTSEKCSLTWSPPLQDGGSDISHYV
VEKRETSRLAWTVVASEVVTNSLKVTKLLEGNEYVFRIMAVNKYGVGEPLES
50 APVLMKNPFVLPGPPKSLEVTNIAKDSMTVCWNRPDSDGGSEIIGYIVEKRRD

SGIRWIKCNKRITDLRLRVTLGLTEDHEYEFRVSAENAAGVGEPSPATVYYKA
CDPVFKPGPPTNAHIVDTTKNSITLAWGKPIYDGGSEILGYVVEICKADEEEW
QIVTPQTGLRVTRFEISKLTEHQEYKIRVCALNKVGLGEATSVPGTVKPEDKL
EAPELDLDELRLKGIVVRAGGSARIHIPFKGRPTPEITWSREEGEFTDKVQIEK
5 GVNYSQSLIDNCDRNDAGKYILKLENSSGSKSAFVTVKVLDTPGPPQNLAVK
EVRKDSAFVLWEPPIDGGAKVKNYVIDKRESTRKAYANVSSKCSKTSFKVE
NLTEGAIYYFRVMAENEFVGVVETVDAVKAAEPPSPGKVTLTDVVSQTS
SLMWEKPEHDGGSRLGYVVMQPKGTEKWSIVAESKVCNAVVTGLSSGQE
YQFRVKAYNEKGKSDPRVLGVPIAKDLTIQPSLKLFPNTYSIQAGEDLKIEIP
10 VIGRPRPNISWVKDGEPLKQTRVNVEETATSTVLHIKEGNKDDFGKYTVTAT
NSAGTATENLSVIVLEKPGPPVGPVRFDEVSAFVVISWEPPAYTGGCQISNYI
VEKRDTTTTTWHMVSATVARTTIKITKLKTGTEYQFRIFAENRYGKSAPLDSK
AVIVQYPFKEPGPPGTPFVTSISKDQMLVQWHEPVNDGGTKIIGYHLEQKEKN
SILWVKLNKTPIQDTKFKTTGLDEGLEEYFKVSAENIVGIGKPSKVSECFVARD
15 PCDPPGRPEAIVITRNNVTLLKWKKPAYDGGSKITGYIVEKKDLDPGRWMKAS
FTNVLETEFTVSGLVEDQRYEFRVIARNAAGNFSEPSDSSGAITARDEIDAPNA
SLDPKYKDVIVVHAGETVLEADIRGKPIPDVVWSKDGKELEETAARMEIKST
IQKTTLVVKDCIRTDGGQYILKLSNVGGTKSIPITVKVLDPRGPPEGLKVTGV
TAEKCYLAWNPPLQDGGANISHYIIEKRETSRLSWTQVSTEVQALNYKVTKL
20 LPGNEYIFRVMANVNYGIGEPLSGPVTACNPYKPPGPPSTPEVSAITKDSMV
VTWARPVDDGGTEIEGYILEKRDKEGVRWTKCNKKTLLDLRLRVTLGLTEGH
SYEFRVAAENAAGVGEPSEPSVFYRACDALYPPGPPSNPKVTDTSRSSVSLAW
SKPIYDGGAPVKGYVVEVKEAAADEWTTCTPPTGLQGKQFTVTKLKENTY
NFRICAINSEGVGEPATLPGSVVAQERIEPPEIELDADLRKVVVLRASATLRLF
25 VTIKGRPEPEVKWEKAEGILTDRAQIEVTSSFTMLVIDNVTRFDSGRYNLTLE
NNSGSKTAFVNVRLDPSAPVNLTIREVKKDSVTLSEWPPIDGGAKITNYIV
EKRETRKAYATITNNCTKTTFRIENLQEGCSYYFRVLASNEYGIGLPAETTEP
VKVSEPPPLPPGRVTLVDVTRNTATIKWEKPESDGGSKITGYVVEMQTKGSEK
WSTCTQVKTLEATISGLTAGEEYVFRVAAVNEKGRSDPRQLGVPVIARDIEIK
30 PSVELPFHTFNVKAREQLKIDVPFKGRPQATVNWVRKDGQTLKETTRNVNVS
KTVTSLSIKEASKEDVGTYELCVSNSAGSITVPITIVLDRPGPPGPIRIDEVSCD
SITISWNPPEYDGGCQISNYIVEKKETTSTTWHIVSQAVARTSIKIVRLTTGSEY
QFRVCAENRYGKSSYSESSAVVAEYPPSPGPPGTPKVHATKSTMLVTWQV
PVNDGGSRVIGYHLEYKERSILWSKANKILIADTQMKVSGLDEGLMYEYRV
35 YAENIAGIGKCSKSCEPVPARPCDPPGQPEVTNITRKSLSKWSKPHYDGGGA
KITGYIVERRELDPGRWLKCNVTNIQETYFEVTELTEDQRYEFRVFARNAADS
VSEPSESTGPIIVKDDVEPPRVMMDVKFRDVIVVKAGEVLKINADIAGRPLPVI
SWAKDGIEIEERARTEIISTDNHTLLTVKDCIRRDGTQYVLTLLKNVAGTRSA
VNCKVLDKPGPPAGPLEINGLTAEKCSLSWGRPQEDGGADIDYYIVEKRETS
40 LAWITCEGELQMTSCKVTKLLKGNEYIFRVTVGNKYGVGEPLSVAIKALDP
FTVPSPTSLEITSVTKESMTLCWSRPESDGGSEISGYIIEERREKNSLRWVRV
KPVYDLRVKSTGLREGCEYEYRVYAENAAGLSLPSETSPLIRAEDPVFLPSPPS
KPKIVDSGKTTITIAWVKPLFDGGAPITGYTVEYKKSDDTDWKTISIQLRGTE
YTISGLTTGAEYVFRVKSVMKVGASDPSDSDPQIAKEREPLFDIDSEMRT
45 LIVKAGASFTMTVPFRGRPVPNVLWSKPDTLRTRAYVDTTDSRTSLTIENAN
RNDSGKYTLTIQNVLSAASLTLLVVKVLDTPGPPTNITVQDVTKEASVLSWDVP
ENDGGAPVKNYHIEKREASKKAWVSVTNNCNRLSYKVNTLQEGAIYYFRVS
GENEFGVGIPAETKEGVKITEKPSPEKLGVTISISKDSVSLTWLKPEHDGGSRI
VHYVVEALEKGQKNWVKCAVAKSTHHVVSGLRENSEYFFRVFAENQAGLS
50 DPRELLLPVLIKEQLEPPEIDMKNFPSHTVYVRAGSNLKVDPISGKPLPKVTL

RDGVPLKATMRFNTEITAENLTINLKESVTADAGRYEITAANSSGTTKAFINIV
VLD R PGPPTGPVVISDITEESVTLKWEPPKYDGGSQVTNYILLKRETSTAVWT
EVSATVARTMMKVMKLTTGEEYQFRIKAENRFGISDHIDSACVTVKLPYTTP
GPPSTPWVTNTVRESITVGWHEPVSNGGSAVVGYHLEMKDRNSILWQKANK
5 LVIRTTHFKVTTISAGLIYEFRVYAENAAGVGKPSHPSEPVLAIDACEPPRNVRI
TDISKNSVSLSWQPAFDGGSKITGYIVERDLDPGRWTKASFTNVTETQFIIS
GLTQNSQYEFRVFARNAVGSISNPSEVVGPI TCIDSYGGPVIDLPLEYTEVVKY
RAGTSVKLRAGISGKPAPTIEWYKDDKELQTNALVCVENTTDLASILKDADR
LNSGCYELKLRNAMGSASATIRVQILDKPGPPGGPIEFKTVTAEKITLLWRPPA
10 DDGGAKITHYIVEKRETSRVVWSMVSEHLEECIITTTKHKNEYIFRVRAVNK
YGIGEPLESDSVVAKNAFVTPGPPGIPEVTKITKNSMTVVWSRPIADGGSDISG
YFLEKRDKKSLGWFKVLKETIRDTRQKV TGLTENS DYQYRVCAVNAAGQGP
FSEPFSEFYKAADPIDPPGPPAKIRIADSTKSSITLGWSKPVYDGGSAVTGYVVEI
RQGE EEWTTVSTKGEVRTTEYVVS NLKPGVNY YFRVSAVNCAGQGEPIEM
15 NEPVQAKDILEAPEIDL DVALRTSVIAKAGEDVQVLIPFKGRPPPTVTWRKDE
KNLGSDARYSIENTDSSSLLTIPQVTRNDTGKYILTIENG VGEPKSSTVS VKVL
DTPAACQKLQVKHVS RGTVTLLWDPPLIDGGSPIINYVIEKR DATKRTWSVVS
HKCSSTSFKLIDLSEKTPFFFRVLAENEIGIGEP CETTEPVKAAEVPAPIRDL SM
KDSTKTSVILSWTKPDFDGGSVITEYVVERKKGGEQTWSHAGISKTCIEV SQ
20 LKEQSVLEFRVFAKNEKGLSDPVTIGPITVKELIITPEVDLSDIPGAQVTVRIGH
NVHLELPYKKGKPKPSISWLKDGLPLKESEFVRFSKTENKITLSIKNAKKEHGG
KYTVILDNAVCRIAPITVITLGPPSKPKGPIRFDEIKADSVILSWDVPEDN GGG
EITCYSIEKRETSQTNWRMVCSSVARTTFKVPNLVKDAEYQFRVRAENRYGV
SQPLVSSIIIVAKHQFRIPGPPGKPIYNVTS DGM SLTWDAPVYDGGSEVTGFH
25 VEKKERN SILWQKVNTSPISGREYRATGLVEGLDYQFRVYAENSAGLSSPSDP
SKFTLAVSPVDPGTPDYIDVTRETITLK WNPPLRDGGSKIVGYSIEKRQGN ER
WVRCNFTDVSECQYTVTGLSPGDRYEFRIIARNAVGTISPPSQSSGIIMTRDEN
VPPIVEFGPEYFDGLIIKSGESLRIKALVQGRPVPRVTWFKD GVEIEKRMNMEI
TDVLGSTSLFVRDATRDHRGVYTVEAKNASGSAKAEIKVKVQDTPGKVV GPI
30 RFTNITGEKMTLWWDAPLNDGCAPITHYIIEKRETSRLAWALIEDKCEAQS YT
AIKLINGNEYQFRVSAVNKFGVGRPLDSDPVVAQIQYTVPDAPGIPEPSNITGN
SITLTWARPESDGGSEIQQYILERREKKSTRWVKVISKRPISETRFKVTGLTEG
NEYEFHVMAENAAGVG PASGISRLIKREP VNP PGPTVVKVTDTSKTTVSLE
WSKPVFDGGMEIIGYIEMCKADLG DWHKVNAEACVKTRYTVTDLQAGEEY
35 KFRVSAINGAGKGDSC EVTGTIKA VDRLTAPELDIDANFKQTHVVRAGASIRL
FIAYQGRPTPTAVWSKPDSNLSLRADIHTTDSFSTLT VENCNRNDAGKYTLTV
ENNSGSKSITFTVKVLDTPGPPGPITFKDVTRGSATLMWDAPLLDGGARIH HY
VVEKREASRRSWQVISEKCTRQIFKVNDLAEGVPYYFRVSAVNEYGVGEPYE
MPEPIVATEQPAPPRRLDVVDTSKSSAVLAWLKP DHDGGS RITGYLLEM RQK
40 GSDFWVEAGHTKQLTFTVERLVEKTEYEFRVKAKNDAGYSEP REAFSSV IIEK
PQIEPTADLTGITNQLITCKAGSPFTIDVPISGRPA PKVTWKLEEMRLKETDRVS
ITTTKDRTTLTVKDSMRGDSGRYFLTLENTAGVKTF SVTVVVIGRPGPVTGPI
EVSSVSAESCVLSWGEPKDGGGTEITNYIVEKRESGTTAWQLVNSSVKRTQIK
VTHLTKYMEYSFRVSSENRFGVSKPLESAPIIAEHPFVPPSAPTRPEVYHVSAN
45 AMSIRWEEPYHDGGSKIIGYWVEKKERN TILWVKENK VPCLECNKYVTGLVE
GLE YQFRTYALNAAGVSKASEASRPIM AQNPVDAPGRPEVTDVTRSTVSLIW
SAPAYDGGSKVVG YIIERKPVSEVG DGRWLKCNYTIVSDNFFT V TALSEGDT
YEFRLAKNAAGVISKGSESTGPVTCRDEY APPKAELDARLHGDLVTIRAGS
DLVLDAAVGGKPEPKIIWTKGDKELDLCEK VSLQYTGKRATAVIKFCDRSDS
50 GK YTLTVKNASGTKAVSVMVKVLDSPGPCGKLT VSRVTQEKCTLAWSLPQE

DGGAEITHYIVERRETSRLNWWVIVEGECPTLSYVVTRLIKNNEYIFRVRAVNK
YGPVGPVESEPIVARNSFTIPSPGPIEEVGTGKEHIIIQWTKPESDGGNEISNYL
VDKREKKSRLRWTRVNKDYVVYDTRLKVTSLMEGCDYQFRVTAVNAAGNSE
PSEASNFIGREPSYTPGPPSAPRVVDTTKHSISLAWTKPMYDGGTDIVGYVLE
5 MQEKDTDQWYRVHTNATIRNTEFTVPDLKMGQKYSFRVA AVNVKGMSEYS
ESIAEIEPVERIEIPDLELADDLKKTVTIRAGASRLMVSVSGRPPPVTWSKQG
IDLASRAIIDTTESYSLIVDKVNRYDAGKYTIEAENQSGKKSATVLVKVYDTP
GPCPSVKVKEVSRDSVTITWEIPTIDGGAPVNNYIVEKREAAMRAFKTVTTKC
SKTLYRISGLVEGTMYYFRVLPENIYGIGEPCETSDAVLVSEVPLVPAKLEVV
10 DVTKSTVTLAWEKPLYDGGSRLTGYVLEACKAGTERWMKVVTCLKPTVLEHT
VTSLNEGEQYLFRIRAQNEKGVSEPRETVTA VTVQDLRVLP TIDLSTMPQKTI
HVPAGRPVELVIPIAGRPPPAASWFFAGSKLRESERVTVETHTKVAKLTIRETT
IRDTGEYTLLEKNVTGTTSETIKVIILDKPGPPTGPIKIDEIDATSITISWEPPELD
GGAPLSGYVVEQRDAHRPGWLPVSESVTRSTFKFTRLTEGNEYVFRVAATNR
15 FGIGSYLQSEVIECRSSIRIPGPPE TLQIFDVSRDGMTLTWYPPEDDGGSQVTGY
IVERKEVRADRWRVNKVPVTMTRYRSTGLTEGLEYEHRVTAINARGSGKPS
RPSKPIVAMDPIAPPGKPQNPRVTDTRTSVSLAWSVPEDEGGSKVTGYLIEM
QKVDQHEWTKCNTTPTKIREYTLTHLPQGAEYRFRVLACNAGGPGEPAEVP
TVKVTEMLEYPDYELDERYQEGIFVRQGGVIRLTIPIKGKFPICKWTKEGQDI
20 SKRAMIATSEHTELVIKEADRGD SGTYDLVLENKCGKKA VYIKVRVIGSPNS
PEGPLEYDDIQVRSVRVSWRPPADDGGADILGYILERREVPKAAWYTIDSRVR
GTSLVVKGLKENVEYHFRVSAENQFGISKPLKSEEPVTPKTPLNPPPEPPSNPPE
VLDVTKSSVSLSWSRPKDDGGSRTGYIYERKETSTDKWVRHNKTQITTTMY
TVTGLVPDAEYQFRIIAQNDVGLSETSPASEPVVCKDPFDKPSQPGELEILSISK
25 DSVTLQWEKPECDGGKEILGYWVEYRQSGDSA WKKSNKERIKDKQFTIGGL
LEATEYEFRVFAENETGLSRPRRTAMSIKTKLTSGEAPGIRKEMKDVTTKLGE
AAQLSCQIVGRPLPDIK WYRFGKELIQSRKYKMSSDGRTHLTVMTEEQEDE
GVYTCIATNEVGEVETSSKLLLQATPQFHPGYPLKEKYYGAVGSTLRLHVMY
IGRPVPAMTW FHHGQKLLQNSENITIENTEHYTHLVMKNVQRKTHAGKYKVQ
30 LSNVFGTVDAILDVEIQDKPKPTGPIVIEALLKNSAVISWKPPADDGGSWITN
YVVEKCEAKEGAEWQLVSSAISVTTCRIVNL TENAGYYFRVSAQNTFGISDPL
EVSSVVIKSPFEKPGAPGKPTITAVTKDSCVVA WKPPASDGGAKIRNYYLEK
REKKQNKWISVTTEEIRETVFSVKNLIEGLEYEFRVKCENLGGESEWSEISEPIT
PKSDVPIQAPHFKEELRNLNVRYQSNATLVCKVTGHPKPIVKWYRQGKEIID
35 GLKYRIQEFKGGYHQLIIASVTD DDATVYQVRATNQGGSVSGTASLEVEVPA
KIHLPKTLEGMGAVHALRGEVVS IKIPFSGKPD PVITWQKGQDLIDNNGHYQV
IVTRSFTSLVFPNGVERKDAGFYV VCAKNRFGIDQKTVELDVADVPDPPRGV
KVSDVSRDSVNLTWTEPASDGGSKITNYIVEKCATT AERWLRVGQARETRYT
VINLFGKTSYQFRVIAENKFGLSKPSEPSEPTITKEDKTRAMNYDEEVDETREV
40 SMTKASHSSTKELYEKYMAEDLGRGEFGIVHRCVETSSKKT YMAKFVKVKG
TDQVLVKKEISILNIARHRNHLHESFESMEELVMIFEFISGLDIFERINTSAFE
LNEREIVSYVHQVCEALQFLHSHNIGHFDIRPENI IYQTRRSSTIKIIEFGQARQL
KPGDNFRLLFTAPEYYAPEVHQHDV VSTATDMWSLGLTVYVLLSGINPFLAE
TNQQIENIMNAEYTFDEEAFKEISIEAMDFVDRLL VKERKSRMTASEALQHP
45 WLKQKIERVSTKVIRTLKHRRYYHTLIKKDLNMV VSAARISCGGAIRSQKGV
VAKVKVASIEIGPVSGQIMHAVGEEGHVKYVCKIENYDQSTQVTWYFGVR
QLENSEKYEITYEDGVAILYVKDITKLDDGTYRCKV VNDYGEDSSYAELFKV
GVREYDYDYCRRTMKKIKRRTDTMRLLERPPEFTL PLYNKTA YVGENVRFG
VTITVHPEPHVTWYKSGQKIKPGDNDKKYTFESDKGLYQLTINSVTTDDDAE
50 YTVVARNKYGEDSCKAKLTVTLHPPPTDSTLRPMFKRLLANAECQEGQSVCF

SEQ ID NO: 112

Figure 55- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of SEQ ID NO: 16 (891 nucleotides in total)

5 5'-GGAATCATGCATCGGACTACACGGATCAAAATCACAGAGCTGAACCCC
CACCTCATGTGTGCCCTCTGCGGGGGTACTTCATCGACGCCACCACTATC
GTGGAGTGCCTGCATTCCTTCTGCAAAACCTGCATCGTGCGCTACCTGGAG
ACCAACAAATACTGCCCCATGTGTGACGTGCAGGTCCATAAAACCCGGCC
GCTGCTGAGCATCAGGTCTGACAAAACACTTCAAGACATTGTCTACAAAT
10 TGGTCCCTGGGCTTTTTAAAGATGAGATGAAACGGCGGGCGGGATTCTAT
GCAGCGTACCCCCTGACGGAGGTCCCCAACGGCTCCAATGAGGACCGCGG
CGAGGTCTTGAGCAGGAGAAGGGGGCTCTGAGTGATGATGAGATTGTCA
GCCTCTCCATCGAATTCTACGAAGGTGCCGGGGACCGGGACGAGAAGAAG
GGCCCCCTGGAGAATGGGGATGGGGACAAAGAGAAAACAGGGGTGCGCT
15 TCCTGCGATGCCCAGCAGCCATGACCGTCATGCATCTTGCCAAGTTTCTCC
GCAACAAGATGGATGTGCCCAGCAAGTACAAGGTGGAGGTTCTGTACGAG
GACGAGCCACTGAAGGAATACTACACCCTCATGGACATCGCCTACATCTA
CCCCTGGCGGGCGGAACGGGCCTCTCCCCCTCAAGTACCGTGTCCAGCCAG
CCTGCAAGCGGCTCACCTAGCCACGGTGCCACCCCCCTCCGAGGGCACC
20 AACACCAGCGGGGCGTCCGAGTCCAGTGGGGCCACCACAGCTGCCAACG
GGGGTAGCTTGAAGTGCCTGCAGACACCATCCTCCACCAGCAGGGGGCGC
AAGATGACTGTCAACGGCGCTCCCGTGCCCCCCTTAAGTTGA-3'

SEQ ID NO: 113

25 **Figure 56- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of SEQ ID NO: 26 (SEQ ID NO: 113)**

AGTCCGTACAGTCCCCGGGGCGGCTCCAATGTCATCCAGTGCTACCGCTG
CGGAGACACCTGCAAAGGGGAGGTGGTCCGTGTCCACAACAACCACTTCC
30 ACATCCGATGCTTCACTTGTCAAGTATGTGGATGTGGCCTGGCCCAGTCGG
GCTTCTTCTTCAAGAACCAGGAGTACATCTGCGCCCAGGACTACCAACAG
CTTTATGGCACCCGCTGTGATAGCTGCCGGGACTTCATCACGGGTGAGGTC
ATCTCTGCCCTGGGCCGTACCTACCGCCCTAAATGCTTCGTATGCAGCTTG
TGCAGGAAGCCTTTCCCTATTGGAGATAAGGTGACCTTCAGTGGGAAAGA
35 ATGTGTATGTCAGACGTGCTCCAGTCAATGACCAGCAGCAAGCCGATCA
AGATCCGTGGACCAAGCCACTGTGCTGGGTGCAAAGAGGAGATTAAACAT
GGCCAGTCACTTCTGGCACTGGACAAGCAGTGGCACGTCAGCTGTTTCAA
ATGCCAGACCTGTAGCGTCATCCTCACTGGGGAATACATTAGCAAAGACG
GTGTTCCATACTGCGAGTCTGACTACCACTCCCAGTTTGGCATCAAATGTG
40 AGACTTGTGACCGGTACATCAGTGGCAGGGTCTTGGAGGCAGGAGGGAA
AACTACCACCCTACCTGTGCCAGATGTGTACGCTGCCACCAGATGTTTAC
TGAGGGGGAGGAGATGTATCTCACAGGTTCTGAGGTTTGGCACCCAATCT
GCAAGCAGGCAGCCAGGGCAGAGAAGAAG-3'

45 **SEQ ID NO: 114**

Figure 57- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of SEQ ID NO: 33 (723 nucleotides in total)

50 5'-GCAACATCAGGTGACTGTCCCAGAAGTGAATCGCAGGGAGAAGAG
CCTGCTGAGTGCAGTGAGGCGGGTCTCCTGCAGGAGGGAGTACAGCC

AGAGGAGTTTGTGGCCATCGCGGACTACGCTGCCACCGATGAGACCC
AGCTCAGTTTTTTGAGAGGAGAAAAAATTCTTATCCTGAGACAAACCA
CTGCAGATTGGTGGTGGGGTGAGCGTGCGGGCTGCTGTGGGTACATT
CCGGCAAACCTATGTGGGGAAGCACGTGGATGAGTACGACCCCGAGGA
5 CACGTGGCAGGATGAAGAGTACTTCGGCAGCTATGGAACCTGAAAC
TCCACTTGGAGATGTTGGCAGACCAGCCACGAACAACCTAAATACCACA
GTGTCATCCTGCAGAATAAAGAATCCCTGACGGATAAAGTCATCCTGG
ACGTGGGCTGTGGGACTGGGATCATCAGTCTCTTCTGTGCACACTATG
CGCGGCCTAGAGCGGTGTACGCGGTGGAGGCCAGTGAGATGGCACAG
10 CACACGGGGCAGCTGGTCCTGCAGAACGGCTTTGCTGACATCATCAC
CGTGTACCAGCAGAAGGTGGAGGATGTGGTGCTGCCCCGAGAAGGTGG
ACGTGCTGGTGTCTGAGTGGATGGGGACCTGCCTGCTGAAGCAGCAA
AGTTCTGAGGGAGACGCAAGTAAAGATACCACAGGTGTCCTAGATTGT
CAACAGACCATTAA-3'

15

SEQ ID NO: 115
FHOS (810-1100 AA)

QLVQNATFRCILATLLAVGNFLNGSQSSGFELSYLEKVSVDVKDTVRRQSLHH
20 LCSLVLQTRPESSDLYSEIPALTRCAKVDFEQLTENLGQLERRSRAAEESLRSL
AKHELAPALRARLTHFLDQCARRVAMLRIVHRRVCNRFHAFLLYLGYTPQA
AREVRIMQFCHTLREFALEYRTCRRVLQQQQKQATYRERNKTRGRMITETE
KFSGVAGEAPSNPSVPVAVSSGPGRGDADSHASKSLTSRLEDTTNRRSR
GMVQSSSPIMPTVGPSTASPEEPPGSSLP

25

SEQ ID NO: 116
FHOS (951-1164 AA)

CNRFHAFLLYLGYTPQAAREVRIMQFCHTLREFALEYRTCRRVLQQQQKQA
30 TYRERNKTRGRMITETEFKSGVAGEAPSNPSVPVAVSSGPGRGDADSHASK
SLLTSRLEDTTNRRSRGMVQSSSPIMPTVGPSTASPEEPPGSSLPSDTSDEIMD
LLVQSVTKSSPRALAAERERKRSRGNRKSRLRTLKSGLGDDLVLQALGLSKGPG
LEV

35

SEQ ID NO: 117
FHOS (1001-1164 AA)

QATYRERNKTRGRMITETEFKSGVAGEAPSNPSVPVAVSSGPGRGDADSHAS
MKSLLTSRLEDTTNRRSRGMVQSSSPIMPTVGPSTASPEEPPGSSLPSDTSDEI
40 MDLLVQSVTKSSPRALAAERERKRSRGNRKSRLRTLKSGLGDDLVLQALGLSKG
PGLEV

SEQ ID NO: 118
mLRRFIP1 129-328

45

CSNLGLPSSGLASKPLPTQNGSRASMLDESSLYGARRGSACGSRAPSEYGSHL
NSSSRASSRASSARASPVVEERPKDFAEKGSRNMPSLAATLASLGGTSSRR
GSGDTSISMDEASIREIKELNELKDQIQDVEGKYMQLKEMKDSLAEVEEK
YKKAMVSNAQLDNEKTNFMYQVDTLKDMLLEEEQLAESQRQ

SEQ ID NO: 119
mAPC2 12-148

5 VRQVEALKAENTHLRQELRDNSSHLSKLETETSGMKEVLKHLQGKLEQEAR
VLVSSGQTEVLEQLKALQTDISSLYNLKFHAPALGPEPAARTPEGSPVHGSGP
SKDSFGELSRATIRLLEELDQERCFLLEIEKE

SEQ ID NO: 120

10 **mCYLN2(1047) 631-996**

DLKATLNSGPGAQQKEIGELKALVEGIKMEHQLELGNLQAKHDLETAMHGK
EKEGLRQKLQEVQEELAGLQQHWREQLQEEQASQHRLELQEAQDQCRDAQLR
AQELEGLDVEYRGQAQAIEFLKEQISLAEKKMLDYEMLRQAEASQRQEAERL
15 REKLLVAENRLQAAESLCSAQSHSVIESSDLSEETIRMKETVEGLQDKLNKRD
KEVTALTSQMDMLRAQVSALENKCKSGEKKIDSLLKEKRRLEAELEAVSRKT
HDASGQLVHISQELLRKERSLNELRVLLLEANRHSPGPERDLSREVHKAEWRI
KEQKLKDDIRGLREKLTGLDKEKSLSEQRRYSLIDPASPELLKLQHQVLSTE
D

20

SEQ ID NO: 121
mACTN3 355-508

25 QTKLRLSHRPAFMPSEGKLVSDIANAWRGLEQVEKGYEDWLLSEIRRLQRLQ
HLAEKFQQKASLHEAWTRGKEEMLNQHDYESASLQEVRAALLRRHEAFESDL
AAHQDRVEHVAALAQELNELDYHEAASVNSRCQAICDQWDNLGTLTHKRR
D

SEQ ID NO: 122

30 **mDTNBP1 1-242**

MLETLRERLLSVQQDFTSGLKTLSDKSREAKVKGKPRTAPRLPKYSAGLELLS
RYEDAWAALHRRAKECADAGELVDSEVVMLSAHWEKKRTSLNELQGQLQQ
LPALLQDLESLMASLAHLETSFEEVENHLLHLEDLCGQCELERHKQAQAQHL
35 ESYKKSRRKELEAFKAELDTEHTQKALEMEHSQQLKLERQKFFEEAFQQD
MEQYLSTGYLQIAERREPMGSMSSMEVNVDVLKQLD

SEQ ID NO: 123

Figure 63- Partial Amino Acid Sequence (mTAKEDA013) AA1-197

40

EKGIKLLQAQKLVQYLRECEDVMDWINDKEAIVTSEELGQDLEHVEVL
QKKFEEFQTDLAAHEERVNEVSQFAAKLIQEQHPPEELIKTKQDEVNA
AWQRLKGLALQRQGKLFGAAEVQRFNRDVDETIGWIKKEQLMASDD
FGRDLASVQALLRKHEGLERDLAALEDKVKALCAEADRLQQSHPLSAS
45 QIQGKR

SEQ ID NO: 124
m14-3-3g 73-247

50 DGNEKKIEMVRAYREKIEKELEAVCQDVLSLLDNYLIKNCSETQYESKVFYLK

MKGDYYRYLAEVATGEKRATVVESSEKAYSEAHEISKEHMQPTHPIRLGLALN
YSVFYIEIQNAPEQACHLAKTAFDDAIAELDTLNEDSYKDSTLIMQLLRDNLTL
LWTSDDQDDGGEGNN

5 **SEQ ID NO: 125**
m14-3-3zeta 56-245

RSSWRVSSIEQKTEGAEEKQQMAREYREKIETELRDICNDVLSLLEKFLIPNA
SQPESKVFYLYLKMKGDYRYLAEVAAGDDKKGIVDQSQQAYQEAFAEISKKEM
10 QPTHPIRLGLALNFSVFYIEILNSPEKACSLAKTALDEAIAELDTLSEESYEDST
LIMQLLRDNLTLWTSDDQDEAEAGEGGEN

SEQ ID NO: 126
14-3-3zeta 19-245

15 YDDMAACMKSVTEQGAELSNEERNLLSVAYKNVVGARRSSWRVSSIEQKT
EGAEEKQQMAREYREKIETELRDICNDVLSLLEKFLIPNASQAESKVFYLYLKM
GDYYRYLAEVAAGDDKKGIVDQSQQAYQEAFAEISKKEMQPTHPIRLGLALNF
SVFYIEILNSPEKACSLAKTAFDEAIAELDTLSEESYKDSTLIMQLLRDNLTLW
20 TSDTQDEAEAGEGGEN

SEQ ID NO: 127
14-3-3zeta 20-210

25 DDMAACMKSVTEQGAELSNEERNLLSVAYKNVVGARRSSWRVSSIEQKTE
GAEEKQQMAREYREKIETELRDICNDVLSLLEKFLIPNASQAESKVFYLYLKM
GDYYRYLAEVAAGDDKKGIVDQSQQAYQEAFAEISKKEMQPTHPIRLGLALNF
SVFYIEILNSPEKACSLAKTAFDEAIAELDTLSEES

30 **SEQ ID NO: 128**
m14-3-3b 59-230
SSWRVISSIEQKTERNEKKQQMKGKEYREKIEAELQDICNDVLELLDKY
LILNATQAESKVFYLYLKMKGDFRYLSEVASGENKQTTVSNSQQAYQEA
FEISKKEMQPTHPIRLGLALNFSVFYIEILNSPEKACSLAKTAFDEAIAE
35 LDTLNEESYKDSTLIMQLLRDNLTLW

SEQ ID NO: 129
m14-3-3theta 82-245

40 YREKVESELRSICTTVLELLDKYLIANATNPESKVFYLYLKMKGDFRYLA
EVACGDDRKQTIENSQGAYQEAFFDISKKEMQPTHPIRLGLALNFSVFY
EILNNPELACTLAKTAFDEAIAELDTLNEDSYKDSTLIMQLLRDNLTLW
TSDSAGEECDAEGAEN

45 **SEQ ID NO: 130**
14-3-3theta 81-245

DYREKVESELRSICTTVLELLDKYLIANATNPESKVFYLYLKMKGDFRYLA
AEVACGDDRKQTIDNSQGAYQEAFFDISKKEMQPTHPIRLGLALNFSVF

YYEILNNPELACTLAKTAFDEAIAELDTLNEDSYKDSTLIMQLLRDNLTLWTSDSAGEECDAAE GAEN

SEQ ID NO: 131

5 **mSPNB2 825-1032**

10 **TRLRKQALQDTLALYKMFSEADACELWIDEKEQWLNNMQIPEKLEDL
EVVQHRFESLEPEMNNQASRVAVVNQIARQLMHNGHPSEEREIRAQQD
KLNTRWSQFRELVDKRDALLSALSIQSYHLECNETKSWIREKTKVIES
TQDLGNDLAGVMALQRKLTGMERDLVAIEAKLSDLQKEAEKLESEHP
DQAQAILSRLAEISDVWE**

SEQ ID NO: 132

Figure 71- Partial Amino Acid Sequence (BC020494(124)) (SEQ ID NO: 132)

15 **AA 1-124**

**DDAAVETAEEAKEPAEADITELCRDMFSKMATYLTGELTATSEDYKLENMKNK
LTSKYLEMKDIAINISRNKLDLNQKYAGLQPYLDQINVIEEQVAALEQAAYK
LDAYSKKLEAKYKKLEKR**

20

SEQ ID NO: 133

MACF1 3984-4240

25 **EKLQPSFEALKRRGEELIGRSQGADKDLAAKEIQDKLDQMVFFWEDIKARAE
EREIKFLDVLELAEKFWYDMAALLTTIKDTQDIVHDLESPGIDPSIIKQQVEAA
ETIKEETDGLHEELEFIRILGADLIFACGETEKPEVRKSIDEMNNAWENLNKTNW
KERLEKLEDAMQAAVQYQDTLQAMFDWLDNTVIKLCMPPVGTDLNTVKD
QLNEMKEFKVEVYQQQIEMEKLNHQGELMLKKATDETDRDIIREPLT**

30 **SEQ ID NO: 134**

MYH11560-1700

35 **GKILRIQLELNQVKSEVDKIAEKDEEIDQMKNRHIRIVESMQSTLDAEIRSRN
DAIRLKKKMEGDLNEMEIQLNHANRMAAEALRNYRNTQAILKDTQLHLDDA
LRSQEDLKEQLAMVERGANLLQAEIEELRATLEQTE**

SEQ ID NO: 135

MPPGB 32-207

40 **CLPGLAKQPSFRQYSGYLRA SDSKHFHYWFVESQNDPKNSPVVLWLNNGPG
CSSLDGLLTEHGPFLIQPDGVTLEYDPYAWNLIANVLYIESPAGVGFSYSDDK
MYLTNDTEVAENNYEALKDFFRLFPEYKDNKLF LTGESYAGIYIPTLAVLVM
QDPSMNLQGLAVGNGLASYE**

45 **SEQ ID NO: 136**

mZYX 230-506

50 **HVQPQPVSANTQPRGPLSQAPTPAPKFAPVAPKFTPVVSKFSPGAPSGPGPQP
NQKMVPPDAPSSVSTGSPQPPSFTYAQQKEKPLVQEKQHPQPPPAQNQNQVR
SPGGPGPLTLKEVEELEQLTQQLMQDMEHPQRQSVAVNESCGKCNQPLARA**

QPAVRALGQLFHITCFTCHQCQQQLQGQQFYSLGAPYCEGCTDTLEKCN
CGQPITDRMLRATGKAYHPQCFTCVVCACPLEGTSFIVDQANQPHCVDPYHK
QYAPRC SVCSEPIMPE

5 **SEQ ID NO: 137**
MPRKCABP 1-382

MFADLDYDIEEDKLGIPVPGKVTLQKDAQNLIGISIGGGAQYCPCLYIVQVF
DNTPAALDGTVAAGDEITGVNGKSIKGTKVEVAKMIEVKGEVTIHYNKLQ
10 ADPKQGMSLDIVLKKVKHRLVENMSSGTADALGLSRAILCNDGLVKRLEELE
RTAELYKGMTEHTKNLLRAFYELSQTNRAFGDVFSVIGVREPQPAASEAFVK
FADAHRSIEKLGIKLLKTIKPMLTDLNTYLNKAIPDTRLTIKKYLDVKFEYLSY
CLKVKEMDDEEYSCIALGEPLYRVSTGNYEYRLILRCRQEARARFSQMRKDV
LEKMELLDQKHVQDIVFQLQRFVSTMSKYND CYAVLRDADVFPIEVDLAH
15 TTLAYGPNQGSFTDGE

SEQ ID NO: 138
MMYLK 568-897

20 TYTCLAENAMGQVSCSATVTVQEKKGEGERKHRLSPARSKPIAPIFLQGLSDL
KVMDGSQVTMTVQVSGNPPPEVIWLHDGNEIQESEDHFHEQKGGWHS LCIQE
VPEDTGTYTCEAWNSAGEVRTRAVLTVQEPHDGTQPWFISKPRSVTATLGQ
SVLISCAIAGDPFSTGHWLRDGRALSKDSGHFELLQNEVDVFTLV LKNVQPWH
AGQYEILLKNRVGECSCQVSLMLHNSPSRAPPRGREPASCEGLCGGGGVGAH
25 GDGDRHGTLRPCWPARGQGWPEEEDGEDVRGLLKRRVETRLHTEEAIRQQE
VGQLDFRDLLGEKVSTKT

SEQ ID NO: 139
Figure 58- Full-length Amino Acid Sequence (mLRRFIP1)

30 MTSPEGAQNKEIDCLSPEAQRLAEARLAAKRAARAEAREIRMKELERQQKEI
YQVQKKYYGLDTKWGDIEQWMEDSERYSRFRNTSASDERLSVGSRGSL
LRTNGYDGDYCGSQSLRRSGRGLSCSNLGLPSSGLASKPLSTQNGSRASMLD
ESSLYGARRGSACGSRAPSEYGSHLNSSSRASSRASSARASPVVEERPKDFA
35 EKGSRNMPSLSAATLASLGGTSSRRGSGDTSISMDTEASIREIKELNELKDQIQ
DVEGKYMQLKEMKDSLAEVEEKYKKAMVSNAQLDNEKTNFMVQVDTLK
DMLLELEEQLAESQRQYEEKNKEFEREKHAHSILQFQFAEVKEALRQREML
EEIRQLQQKQAGFIREISDLQETIEWKDKKIGALERQKEFFDSIRSERDDLREET
VKLKEELKKHGIILNSEIATNGETSDTVNDVGYQAPT KITKEELNALKSAGEG
40 TLDVRLKKLIDERECLLEQIKKLKGQLEGRQKNNKLDLLRAEDGILENGTDA
HVMDLQRDANRQISDLKFKLAKSEQETALEQNVIRLESQVTRYRSAENAE
KIEDELKAEKRKLQRELRSALDKTEELEVSNGHLVKRLEKMKANRSALLSQQ

SEQ ID NO: 140
Figure 59- Full-length Amino Acid Sequence (mAPC2)

45 MTSSMASYEQLVRQVEALKAENTHLRQELRDNSSHL SKLETETSGMKEVLK
HLQGKLEQEARVLVSSGQTEVLEQLKALQTDISSLYNLKFHAPALGPEPAART
PEGSPVHGSGPSKDSFGELSRATIRLLEELDQERCFL LSEIEKEEKEKLWYYSQ
50 LQGLSKRLDELPHVDTFSMQMDLIRQQLEFEAQHIRSLMEERFGTSDEMVQR

AQIRASRLEQIDKELLEAQDRVQQTEPQALLAVKPVAVEEEQEAEVPTHPE
 TPQPGNSKVEVFWLLSMLATRDQEDTARTLLAMSSSPESCVAMRRSGCLPL
 LLQILHGTEAGSVGRAGIPGAPGAKDARMRANAALHNIVFSQPDQGLARKEM
 RVLHVLEQIRAYCETCWDWLQARDSGTETPVPIEPQICQATCAVMKLSFDEE
 5 YRRAMNELGGLQAVAELLQVDYEMHKMTRDPLNLALRRYAGMTLTNLTFG
 DVANKATLCARRGCMEDIAVQLGSESEELHQVVSSILRNLSWRADINSKKVL
 REVGSM TALMECVLRASKESTLKS VLSALWNLSAHSTENKAAICQVDGALGF
 LVSTLT YRCQGN SLAVIESGGGILRN VSSLIATREDYRQVLRDHNCLQTLLQH
 LTSHSLTIVSNACGTLWNLSARSPRDQELLWDLGAVGMLRNLVHSHKHKMIA
 10 MGSAAALRNLLAHRPAKYQAAAMAVSPGTCVPSLYVRKQRALEAELDTRHL
 VHALGHLEKQSLPEAETTSKKPLPPLRHL DGLVQDYASDSGCFDDDDAPS LA
 AAATTAEPASPAVMSMFLGGPFLOQALARTPPARQGGLEAEKEAGGEAAV
 AAKAKAKLALAVARIDRLVEDISALHTSSDDSFSLSSGDPGQEAPREGRAQSC
 SPCRGT EGGRREAGSRAHPLRLKAAHTSLSNDSLNSGSTSDGYCTREHMT
 15 CPLAALAEHRDDPVRGQTRPRRLDLDLPSRAELPARDTAATDARVRTIKLSPT
 YQHVPLLDGAAGAGVRPLVGPSTPGARKQAWIPADSLSKVPEKLVASPLPI
 ASKVLQKLVAQDGPM SLRCSLSSLSSTGHAVPSQAENLSDSSLEGLEEAG
 PGAEELGRAWRASGSTSLPVSIAPQRGRSRLGVEDATPSSSENCEVQETPL
 VLSRCSVSSLGSFESRSIASSIPSDPCSGLSGTVSPSELPD SPGQTMPPSRSKT
 20 PPAPPGQETSQFSLQWESYVKRFLDIADCRERCQPPSELDAGSVRFTVEKPDE
 NFSCASSLSALALHELYVQQDVELRLRPACPERAVGGGGHRRRDEAASRLD
 GPAPAGSRARSATDKELEALRECLGAAMPARLRKVASALVPGRSLPVPVY
 MLVPAPARGDDSGTDSAEGTPVNFSSAASLSDET LQGPSRDKPAGPGDRQKP
 TGRAAPARQTRSHRPAAGAGKSTEHTRGPCNRAGLELPLSRPQSARSNRD
 25 SSCQTRTRGDGALQSLCLTTPTEEA VYCFYDSDEEPPATAPPPRRASAI
 PRAK REKPAGRKETPSRAAQPATLPVRAQPRLIVDETPPCYSLTSSASSLSEPEAEQ
 ANHARGPEQGSKQDSSPSRAEEELLQRCISLAMPRRRRTQVPGSRRRKPRALR
 SDIRPTEITQKCQEEVAGSDPASDLSVEWQAIQEGANSIVTWLHQAAKASL
 EASSESDSL SLVSGVSAGSTLQPSKLRKGRKPAAEAGGAWRPEKRGTTSTKI
 30 NGSPRLPNGPEKAKGTQKMMAGESTMLRGRTVIYSAGPASRTQSKGISGPCT
 TPKKTGTSGTTQPETVTKAPSPEQQRSLHRPGKISELAALRHPPRSATPPAR
 LAKTPSSSSSQTSPASQPLPRRSPLATPTGGPLPGPGGSLVPKSPARALLAKQH
 KTQKSPVRIPFMQRPARRVPPPLARSPPEGSRGRAGAEGTPGARGSRGLVLR
 MASARSSGSESSDRSGFRRQLTFIKESPGLLRRRRSELSSADSTASTSQAASPR
 35 RGRPALPAVFLCSSRCDELRVSPRQPLAAQRSPQAKPGLAPLAPRRTSSESPSR
 LPVRASPGRPETVKRYASLPHISVSRRSDSAVSVPTTQANATRGS DGEARPL
 PRVAPPGTTWRRIKDEDVPHILRSTLPATALPLRVSSPEDSPAGTPQRKTS
 DAV VQTEDVATSKTNSSTSPSLESRDPPQAPASGPVAPQGS DVG PVLTKPPASAPF
 PHEGLSAVIAGFPTS RHGSPSRAARVPPFNYVPSPMAAATMASDSAVEKAPVS
 40 SPASLLE

SEQ ID NO: 141

Figure 60- Full-length Amino Acid Sequence (mCYLN2(1047))

45 MQKPSGLKPPGRGGKHSSPVGRPSVGSASSSVVASTSGSKEGSPLHKQASGPS
 SSGAAATVSEKPGPKAAEVGDDFLGHFVVGGERVWVNGVKPGVVQYLGETQF
 APGQWAGVVLDDPVGKNDGAVGAVRYFECPALQGIFTRPSKLTRQPTAEGSG
 SDTHSVESLTAQNLSLHSGTATPPLTGRVIPLRESVLNSSVKTGNEGSNLSDSG
 SVKRGDKDLHLGDRVLVGGTKTG VVRYVGETDFAKGEWCGVELDEPLGKN
 50 DGAVAGTRYFQCPPKFGLFAPIHKVIRIGFPSTSPAKAKKTKRMAMGV SALTHS

PSSSSISSVSSVASSVGGPASRSGLLTETSSRYARKISGTIALQEALKEKQQHIEQ
 LLAERDLERA EVA KATSHICEVEKEIALLLKAQHEQYVAEAEKLRARLLVEN
 VRKEKVDLSNQLEEERRKVEDLQFRVEEESITKGDLETQTQLEHARIGELEQS
 LLEKAQAERLLRELADNRLTTVAEKSRVLQEEELSLRRGEIEELQHCLLQSG
 5 PPPADHPEAAETLRLRERLLSASKEHQDDSTLLQDKYEHMLKTYQTEVDKLR
 AANEKYAQEVADLKAKVQQATTENMGLMDNWKSKLDSLASHQKSLEDLK
 ATLNSGPGAQQKEIGELKALVEGIKMEHQLELGNLQAKHDLETAMHGKEKEG
 LRQKLQEVQEELAGLQQHWREQLQEEQASQHRLELQEAQDQCRDAQLRVQEL
 EGLDVEYRGQAQAIEFLKEQISLAEKKMLDYEMLQRAEAQSRQEAERLREKL
 10 LVAENRLQAAESLCSAQHSHVIESSDLSEETIRMKETVEGLQDKLNKRDKVT
 ALTSQMDMLRAQVSVLENKCKSGEKKIDSLLEKRRLEAELEAVSRKTHDAS
 GQLVHISQELLRKERSLNELRVLLLEANRHSPGPERDLSREVHKA EWRIKEQK
 LKDDIRGLREKLTGLDKEKSLSEQRYSLIDPASPELLKLQHQLVSTEDALRD
 ALNQAQQVERLVEALRGCSDRQTISNSGSANGIHQPDKAHKQEDKH

15

SEQ ID NO: 142

Figure 61- Full-length Amino Acid Sequence (mACTN3)

MMMVMQPEGLGAGEGPFSGGGGGGEYMEQEEDWDRDLLLLDPAWEKQQRKT
 20 FTAWCNSHLRKAGTQIENIEEDFRNGLKMLLLEVISGERLPRPDKGKMRFBK
 IANVNKALDFIASKGVKLVSIGAEIVDGNLKM T LGM IWTIILRFAIQDISVEET
 SAKEGLLLWCQRKTAPYRNVNVQNFHTSWKDGLALCALIHRHRPDLIDYAKL
 RKDDPIGNLNTAFEVAEKYLDIPKMLDAEDIVNTPKPDEKAIMTYVSCFYHAF
 AGAEQAETAANRICKVLAVNQENELMEEYEKLASELLEWIRRTVPWLENRV
 25 GEPSMSAMQRKLEDFRDYRRLHKPPRVQEKQCQLEINFNTLQTKLRLSHRPAF
 MPSEGKLVSDIANAWRGLEQVEKGYEDWLLSEIRRLQRLQHLAEKFQQKASL
 HEAWTRGKEEMLNQHDYESASLQEV RALLRRHEAFESDLAAHQDRVEHIAA
 LAQELNELDYHEAASVNSRCQAICDQWDNLGTLTQKRRDALERMEKLLETID
 QLQLEFARRAAPFNNWLDGAIEDLQDVWLVSVEETQSLLTAHEQFKATLPE
 30 ADRERGAILGIQGEIQKICQTYGLRPKSGNPYITLSSQDINNKWDTVRKLVPSR
 DQTLQEELARQQVNERLRRQFAAQANAIGPWIQGKVEEVGR LAAGLAGSLEE
 QMAGLRQQEQNIINYKSNIDRLEGDHQLLQESLVFDNKHTVYSMEHIRVGWE
 QLLTSIARTINEVENQVLTRDAKGLSQEQLNEFRASFNFDRKRNGMMEPDDF
 RACLISMGYDLGEVEFARIMTMVDPNAAAGVVTQAFIDFMTRETAETDTAEQ
 35 VVASFKILAGDKNYITPEELRRELPAEQAEYCIRRM APYKGS GAPSGALDYVA
 FSSALYGESDL

SEQ ID NO: 143

Figure 62- Full-length Amino Acid Sequence (mDTNBP1)

40

MLETLRERLLSVQQDFTSGLKTLSDKSREAKVKGKPRTAPRLPKYSAGLELLS
 RYEDAWAALHRRAKECADAGELVDSEVVMLSAHWEKKRTSLNELQGQLQQ
 LPALLQDLESLMASLAHLETSFEEVENHLLHLEDLCGQCELERHKQAQAQHL
 ESYKKSKRKELEAFKAELDTEHTQKALEMEHTQQLK LKERQKFFEEAFQQD
 45 MEQYLSTGYLQIAERREPMGSMSSMEVNVDVLEQMDLMDISDQEALDVFLN
 SGGEDNIVMSPGVEMESNPNQNMESLQIPSPSESASQPPASPSACTDLDTADAP
 LIQSDEEEVQVDTALVTLHTDRKSTPGVSDDSDQCDSTQDI

50

SEQ ID NO: 144

Figure 64- Full-length Amino Acid Sequence (m14-3-3g)

5 MVDREQLVQKARLAEQAERYDDMAAAMKNVTELNEPLSNEERNLLSVAYK
NVVGARRSSWRVISSIEQKTSADGNEKKIEMVRAYREKIEKELEAVCQDVLSL
LDNYLIKNCSETQYESKVFYLMKMGDYYRYLAEVATGEKRATVVESFEKAYS
EAHEISKEHMQPTHPIRLGLALNYSVFYYEIQNAPEQACHLAKTAFDDAIAEL
DTLNEDSYKDSTLIMQLLRDNLTWTSDDQDDGGEGNN

10 **SEQ ID NO: 145**

Figure 65- Full-length Amino Acid Sequence (m14-3-3zeta)

MDKNELVQKAKLAEQAERYDDMAACMKSVTEQGAELSNEERNLLSVAYKN
VVGARRSSWRVSSIEQKTEGAEEKQQMAREYREKIETELRDICNDVLSLLE
15 KFLIPNASQPESKVFYLMKMGDYYRYLAEVAAGDDKKGIVDQSQQAYQEAFE
ISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAELDTLSEE
SYKDSTLIMQLLRDNLTWTSDTQGDEAEAGEGGEN

SEQ ID NO: 146

20 **Figure 66- Full-length Amino Acid Sequence (14-3-3zeta)**

MDKNELVQKAKLAEQAERYDDMAACMKSVTEQGAELSNEERNLLSVAYKN
VVGARRSSWRVSSIEQKTEGAEEKQQMAREYREKIETELRDICNDVLSLLE
KFLIPNASQAESKVFYLMKMGDYYRYLAEVAAGDDKKGIVDQSQQAYQEAF
25 EISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAELDTLSE
ESYKDSTLIMQLLRDNLTWTSDTQGDEAEAGEGGEN

SEQ ID NO: 147

Figure 67- Full-length Amino Acid Sequence (m14-3-3b)

30 MTMDKSELVQKAKLAEQAERYDDMAAAMKAVTEQGHELSNEERNLLSVAY
KNVVGARRSSWRVISSIEQKTERNEKKQQMGKEYREKIEAELQDICNDVLELL
DKYLILNATQAESKVFYLMKMGDYFRYLSEVASGENKQTTVSNSQQAYQEAF
EISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAELDTLNE
35 ESYKDSTLIMQLLRDNLTWTSENQGDAGEGEN

SEQ ID NO: 148

Figure 68- Full-length Amino Acid Sequence (m14-3-3theta)

40 MEKTELIQKAKLAEQAERYDDMATCMKAVTEQGAELSNEERNLLSVAYKNV
VGGRSAWRVISSIEQKTDTSKKLQLIKDYREKVESELRSICTTVLELLDKYL
IANATNPESKVFYLMKMGDYFRYLAEVACGDDRKQTIENSQGAYQEAFDISK
KEMQPTHPIRLGLALNFSVFYYEILNPELACTLAKTAFDEAIAELDTLNEDSY
45 KDSTLIMQLLRDNLTWTSDSAGEECDAAEGAEN

SEQ ID NO: 149

Figure 69- Full-length Amino Acid Sequence (14-3-3theta)

MEKTELIQKAKLAEQAERYDDMATCMKAVTEQGAELSNEERNLLSVAYKNV
5 VGGRRSAWRVISSIEQKTDTSKLLQLIKDYREKVESELRSICTTVLELLDKYL
IANATNPESKVFYLMKMGDYFRYLAEVACGDDRKQTIDNSQGAYQEAFDISK
KEMQPTHPIRLGLALNFSVFYYEILNNPELACTLAKTAFDEAIAELDTLNEDSY
KDSTLIMQLLRDNLTLWTSDSAGEECDAAEGAEN

10 SEQ ID NO: 150

Figure 70- Full-length Amino Acid Sequence (mSPNB2)

NH₂-MELQRTSSVSGPLSPA YTGQVPYNNQLEGRFKQLQDEREAVQKKFTT
KWNNSHLARVSCRITDLYTDLRDGRMLIKLLEVLSGERLPKPTKGRMRIHCL
15 ENVDKALQFLKEQRVHLENMGSHDIVDGNHRLTLGLIWTIILRFQIQDISVETE
DNKEKKSADALLWCQMKTAGYPNVNIHNFTTSWRDGMFAFNALHKHRP
DLIDFDKLLKSNHYNLQNAFNLAEQHLGLTKLLDPEDISVDHPDEKSIITYV
VTYYHYFSKMKALAVEGKRIGKVLDAIETEKMIKEYETLASDLLEWIEQTHI
LNNRKFANSLVG VQQQLQAFNTYRTVEKPPKFTEKGNLEVLLFAIQSKMRAN
20 NQKVYMPREGKLISDINKA WERLEKAEHERELALRNELIRQEKLEQLARRFD
RKAAMRETWLSNQRLVSQDNFGFDLPAVEAATKKHEAIETDIAAYEERVQ
AVVAVARELEAENYHDIKRITARKDNVIRLWEYLLELLRARRQRLEMNLGLQ
KIFQEMLYIMDWMDMKVLLLSQDYGKHLGVEDLLQKHALVEADIAIQAE
RVRGVNASAQKFATDGEQYKPCDPQVIRDRVAHMEFCYQELCQLAAERRAR
25 LEESRRLWKFFWEMAE EEGWIREKEKILSSDDYGKDLTSVMRLLSKHRAFED
EMSGRSGHFEQAIKEGEDMIAEEHFGSEKIRERIIYIREQWANLEQLSAIRKKR
LEEASLLHQFQADADDIDAWMLDILKIVSSNDVGHDEYSTQSLVKKHKDVAE
EITNCRPTIDTLHEQASALPQAHAESPDVKGRLAGIEERCKEMAELTRLRKQA
LQDTLALYKMFSEADACELWIDEKEQWLNNMQIPEKLEDLEVIQHRFESLEP
30 EMNNQASRVAVVNQIARQLMHNGHPSEKEIRAQQDKLNTRWSQFRELVDRK
KDALLSALSQNYHLECNETKSCIREKTKVIESTQDLGNDLAGVMALQCKLTG
MERDLVAIEAKLSDLQKEAEKLESEHPDQAQAILSRLAEISDVWEEMKTTLK
NREASLGEASKLQQFLRDLDDFQSWLSRTQTAIASEDMPNTL TEAEKLLTQH
ENIKNEIDNYEEDYQKMRDMGEMVTQGQTD AQYMFLRQRLQALDTGWNEL
35 HKMWENRQNLLSQSHAYQQFLRDTKQAE AFLNNQEYVLAHTEMPTTLEGA
EAAIKKQEDFMTTMDANEEKINAVVETGRRLVSDGNINS DRIQEKVDSIDDR
HRKNREAASELLMRLKDNRD LQKFLQDCQELSLWINEKMLTAQDMSYDEAR
NLHSLWLKHQAFMAELASNKEWLDKIEKEGMQLISEKPETEAVVKEKLTGL
HKMWEVLESTTQTKAQR LFDANKAELFTQSCADLDKWLHGLESQIQSDDYG
40 KDLTSVNILLKKQQMLENQMEVRKKEIEELQSQAQALSQEGKSTDEVDSKRL
TVQTKFMELLEPLSERKHNL LASKEIHQFN RDVEDEILWVGERMPLATSTDH
GHNLTQTVQLLIKKNQTLQKEIQGHQPRIDDIFERSQNIITDSSSLNAEAIQRRLA
DLKQLWGLLIEETEKRRHRLLEE AHKAQQYYFDAEAEAWMSEQELYMMSE
EKAKDEQS AVSMLKKHQILEQAVEDYAETVHQLSKTSRALVADSHPESERIS
45 MRQSKVDKLYAGLKD LAEERRGKLDERHRLFQLNREVDDLEQWIAEREVVA
GSHELGDYEHVTMLQERFREFARDTGNIGQERVDTVNNMADELINS GHSD
AATIAEWKDGLNEAWADLLELIDTRTQILAASYELHKFYHDAKEIFGRIQDKH
KKLPEELGRDQNTVETLQRMHTTFEHDIQALGTQVRQLQEDAARLQAAYAG
DKADDIQKRENEVLEAWKSLLDACEGR RVRLVDTGDKFRFFSMVRDLMLW
50 MEDVIRQIEAQEKPRDVSSVELLMNNHQGIKAEIDARND SFTACIELGKSLLA

RKHYASEEIKEKLLQLTEKRKEMIDKWEDRWEWRLILEVHQFSRDASVAEA
WLLGQEPYLSSREIGQSVDEVEKLIK RHEAFEKSAATWDERFSALERLTTLEL
LEVRRQQEEEEERKRPPSPDPNTKVSEEAESQQWDTSKGDQVSQNGLP AEQG
SPRVSYRSQTYQNYKNFNSRRTASDHSWSGM

5

SEQ ID NO: 151

Figure 72- Full-length Amino Acid Sequence (MACF1) (SEQ ID NO: 151)

MSSSDEETLSERSCRSERSYRSERSGSLSPCPPGDTLPWNLPLHEQKK
10 RKSQDSVLDPAERA VVRVADERDRVQKKTFTKWVNKHLMKVRKHINDLYE
DLRDGHNLISLLEVLSGIKLPREKGRMRFHRLQNVQIALDFLKQRQVKLVNIR
NDDITDGNPKLTLGLIWTIILHFQISDIYISGESGDMSAKEKLLLWTQKV TAGY
TGIKCTNFSSCWS DGKMFNALIHRYPDLVDMERVQIQSNRENLEQAFEVAE
15 RLGVTRLLDAEDVDVPS PDEKSVITYVSSIYDAFPKVPEGGEGISATEVDSRW
QEYQSRVDSLIPWIKQHTILMSDKTFPQNPVELKALYNQYIHFKETEILAKERE
KGRIEELYKLLLEVWIEFGRIKLPQGYHPNDVEEEWGKLIIEMLEREKSLRPAVE
RLELLLQIANKIQNGALNCEEKLTAKNTLQADAAHLESGQPVCESDVIMYI
QECEGLIRQLQVDLQILRDENYYQLEELAFRVMRLQDELVTLRLECTNLYRK
GHFTSLELVPPSTLTTHLKAEP LTKATHSSSTSWFRKPMTRAE LGPSAPLKM
20 KAISDLCMNYCLWVEEMQMKLERA EWGNDLPSVELQLETQQHIHTSVEELG
SSVKEARLYEGKMSQNFHTSYAETLGKLETQYCKLKETSSFRMRHLQSLHKF
VSRATAELIWLNEKEEEEELAYDWS DNNSNISAKRNYFSELTMELEEKQDVFR
SLQDTAELLSLENHPAKQTVEA YSAAVQSQLQWMKQLCLCVEQHV KENTAY
FQFFSDARELESFLRN LQDSIKRKYSCDHNTSLSRLEDLLQDSMDEKEQLIQSK
25 SSVASLVGRSKTIVQLKPRSPDHVLKNTISVKA VCDYRQIEITICKNDEC VLED
NSQRTKWKVISPTGNEAMVPSVCFLIPPNKDAIEMASRVEQSYQKVMALWH
QLHVNTKSLISWNYLRKDL DLVQTNLEKLRSSAPGECHQIMKNLQAHYED
FLQDSRDSVLF SVADRLRLEEEVEACKARFQHLMKSMENEDKEETVAKMYIS
ELKNIRLRLEEYEQRVVKRIQSLASSRTDRDAWQDNALRIAEQEHTQEDLQQ
30 LRSDLDAVSMKCDSFLHQSPSSSVPTLRSELNLLVEKMDHVYGLSTVYLNK
LKTVDVIVRSIQDAELLVKG YEIKLSQEEVVLADLSALEAHWSTLRHWLSDV
KDKN SVFSVLDEEIAKAKVVAEQMSRLTPERNLDLERYQEKGSQ LQERWHR
VIAQLEIRQSELESIQEVLGDYRACHGTLIKWIEETTAQQEMMKPGQAEDSRV
LSEQLSQQTALFAEIERNQTKLDQCQKFSQQYSTIVKDYELQLMTYKAFVESQ
35 QKSPGKRRRMLSSSDAITQEFMDLRTRYTALVTLTTQHVKYISDALRRLEEEE
KVVEEEKQEHVEKV KELLGWVSTLARNTQGKATSSETKESTDIEKAILEQQV
LSEELTTKKEQVSEAIKASQIFLAKHGHKLSEKEKKQISEQLNALNKAYHDL C
DGSANQLQQLQSQLAHQTEQKTLQKQ QNTCHQQLEDLCSWVGQAERALAG
HQGRTTQQDLSALQKNQSDLKDLQDDIQNRATSFATVVKDIEGFMEENQTKL
40 SPRELTALREKLHQAKEQYEALQEETRVAQKELEEAVTSALQQETEKSKAAK
ELAENKKKIDALLDWVTSVGSSGGQLLTNLP GMEQLSGASLEKGALD TTDG
YMGV NQAPEKLDKQCEMMKARHQELLSQQQNFILATQSAQAFLDQHGHNL
TPEEQ QMLQQKL GELKEQYSTSLAQSEAE LKQVQTLQDELQKFLQDHKEFES
WLERSEKELENMHKGGSSPETLP SLLKRQGSFSEDVISHKGDLRFVTISGQKV
45 LDMENSFKEGKEPSEIGNLVKDKLKDATERY TALH SKCTRLGSHLNM L LGQY
HQFQNSADSLQAWMQACEANVEKLLSDTAASDPGV LQEQLATTKQLQEELA
EHQVPVEKLQKVARDIMEIEGEPAPDHRHVQET TDSILSHFQSLSYSLAERSSL
LQKAIAQSQSVQDSLESLLQSIGEVEQNLE GKQVSSLSSGVIQEALATNMK LK
QDIARQKSSLEATREMVTRFMETADSTTAAVLQ GKLAEVSQRFEQLCLQQQE
50 KESSLKKLLPQAEMFEHLSGKLQQFMENKSRMLASGNQPDQDITHFFQIQIE

LNLEMEDQQENLDTLEHLVTELSSCGFALDLCQHQRVQNLRKDFTELQKTV
KEREKDASSCQEQLDEFRLVRTFQKWLKETEGSIPPTETSMSAKELEKQIEH
LKSLLDDWASKGTLVEEINYKGTSLENLIMEITAPDSQGKTGSILPSVGSSVGS
VNGYHTCKDLTEIQCDMSDVNLKYEKLGGVLHERQESLQAILNRMEEVHKE
5 ANSVLQWLESKEEVLKSMDAMSSPTKTETVKAQAESNKAFLAELEQNSPKIQ
KVKEALAGLLVTYPNSQEAENWKKIQEELNSRWERATEVTVARQRQLEESA
SHLACFQAAESQLQPWLMEKELMMGVLGPLSIDPNMLNAQKQQVQFMLKEF
EARRQQHEQLNEAAQGILTGPGDVSLSTSQVQKELQSINQKWVELTDKLNRS
SSQIDQAIVKSTQYQELLQDLSEKVRVAVGQRLSVQSAISTQPEAVKQQLEETS
10 EIRSDLEQLDHEVKEAQTLCDELSVLIGEYKDELKKRLETVALPLQGLEDL
AADRINRLQAALASTQQFQQMFDELRTWLDDKQSQQAKNCPISAKLERLQSQ
LQENEEFQKSLNQHSGSYEVIVAEGESLLSVPPGEEKRTLQNQLVELKNHWE
ELSKKTADRQSRKDCMQKAQKYQWHVEDLVPWIEDCKAKMSELRVTLDP
VQLESSLLRSKAMLNEVEKRRSLLEILNSAADILINSSEADEDGIRDEKAGINQ
15 NMDAVTEELQAKTGSLEEMTQRLREFQESFKNIEKKVEGAKHQLEIFDALGS
QACSNKNLEKLRAQQEVLQALEPQVDYLRNFTQGLVEDAPDGSDASQLLHQ
AEVAQQEFLEVKQRVNSGCVMMENKLEGIGQFHCVRVREMFSQLADLDELD
GMGAIGRDTDSLQSQIEDVRLFLNKIHVLKLDIEASEAECRHMLEEGLDLDL
GLKRELEALNKQCGKLTERRGARQEQLTLGRVEDFYRKLKGLNDATTAA
20 EEAEALQWVVGTEVEIINQQLADFKMFQKEQVDPLQMKLQQVNLGQGLIQ
SAGKDCDVQGLEHDMEEINARWNTLNKKVAQRIQLQEALLHCGKFQDALE
PLLSWLADTEELIANQKPPSAEYKVVKAQIQEQKLLQRLDDRKATVDMMLQA
EGGRIAQSAELADREKITGQLESLESRWTELLSKAAARQKQLEDILVLAKQFH
ETAEPISDFLSVTEKKLANSEPVGTQTAQIQQQIIRHKALEEDIENHATDVHQA
25 VKIGQSLSSLTSPAEEQGVLEKIDSLQARYSEIQDRCCRKAALLDQALSNAFLF
GEDEVEVLNWLAEVEDKLSSVFVKDFKQDVLHRQHADHLALNEEIVNRKKN
VDQAIKNGQALLKQTTGEEVLLIQEKLDGIKTRYADITVTSSKALRTLEQARQ
LATKFQSTYEELTGWLREVEEELATSGGQSPTGEQIPQFQQRQKELKKEVME
HRLVLDTVNEVSRALLELVPWRAREGLDKLVSDANEQYKLVSDTIGQRVDEI
30 DAAIQRSQQYEQAADAELAWVAETKRKLMA LGPIRLEQDQTTAQLQVQKAF
SIDIIRHKDSMDELFSHRSEIFGTCGEEQKTVLQEKTESLIQQYE AISLLNSERY
ARLERAQVLVNQFWETYEELSPWIEETRALIAQLPSAIDHEQLRQQQEEMRQ
LRESIAEHKPHIDKLLKIGPQLKELNPEEGEMVEEKYQKAENMYAQIKEEVQR
RALALDEAVSQSTQITEFHDKIEPMLTLENLSSRLRMPPLIPAEVDKIRECISD
35 NKSATVELEKLQPSFEALKRRGEELIGRSQGADKDLAAKEIQDKLDQMVFFW
EDIKARAEEREIKFLDVLELA EKFWYDMAALLTTIKDTQDIVHDLSPGIDPSII
KQQVEAAETIKEETDGLHEELEFIRILGADLIFACGETEKPEVRKSIDEMNNAW
ENLNKTWKERLEKLEDAMQAAVQYQDTLQAMFDWLDNTVIKLC TMPPVGT
DLNTVKDQLNEMKEFKVEVYQQQIEMEKL NHQGELMLKKATDETDRDIIRE
40 PLTELKHLWENLGEKIAHRQHKL EGALLALGQFQHAEELMSWLTHTEELLD
AQRPISGDPKVIEVELAKHHVLKNDVLAHQATVETV NKAGNELLESSAGDDA
SSLRSRLEAMNQCWESVLQKTEEREQQLQSTLQQAQGFHSEIEDFLL ELTRME
SQLSASKPTGGLPETAREQLDTHMELYSQLKAKEETY NQLLDKGRMLLSRD
DSGSGSKTEQSVALLEQKWHVVS SKMEERKSKLEEALNLATEFQNSLQEFIN
45 WLTLAEQSLNIASPPSLILNTVLSQIEEHKVFANEVNAHRDQIIELDQTGNQLK
FLSQKQDVVLIKNLLSVVQSRWEKV VQRSIERGRSLDDARKRAKQFHEAWK
KLIDWLEDAESHLDSELEISNDPDKIKLQLSKHKEFQKTLGGKQPVYDTTIRT
GRALKEKTLLPEDTQKLDNFLGEVRDKWDTVCGKSVERQHKLEEALLFSGQ
FMDALQALVDWLYKVEPQLAEDQPVHGDLDLVMNLMDAHKVFQKELGKR
50 TGTVQVLKRSGRELIENS RDDTTWVKGQLQELSTRWDTVCKLSVSKQSRLEQ

ALKQAEVFRDTVHMLLEWLSEAEQTLRFRGALPDDTEALQSLIDTHKEFMKK
VEEKRVDSNSAVAMGEVILAVCHPDCITTIKHWITIIRARFEEVLTWAKQHQQ
RLETALSELVANAELLEELLAWIQWAETTLIQRDQEPQNPIDRVKALIAEHQT
FMEEMTRKQPDVDRVTKYKRKNIEPTHAPFIEKSRSGGRKSLSQPTPPMPIL
5 SQSEAKNPRINQLSARWQQVWLLALERQQRKLNDALDRLEELKEFANFDFDV
WRKKYMRWMNHKKSRVMDFFRRIDKDQDGKITRQEFIDGILASKFPTTKLE
MTAVADIFDRDGDGYIDYYEFVAALHPNKDAYRPTTDADKIEDEVTRQVAQ
CKCAKRFQVEQIGENKYRFGDSQQRLVRILRSTVMVRVGGGWMALDEFLV
KNDPCRARGRTNIELREKFILPEGASQGMTPFRSRGRRSKPSSRAASPTRSSSS
10 ASQSNHSCTSMPSPTASGTKVIPSSGSKLKRPTPTFHSSRTSLAGDTSNSSS
PASTGAKTNRADPKKSASRPGSRAGSRAGSRASSRRGSDASDFDLLETQSACS
DTSESSAAGGQGNRRGLNPKSKIPTMSKKTTTASPRTPGPKR

SEQ ID NO: 152

15 **Figure 73- Full-length Amino Acid Sequence (MYH1)**

MSSDSEMAIFGEAAPFLRKSERERIEAQNKPFDAKTSVFVVDPKESFVKATVQ
SREGGKVTAKEAGATVTVKDDQVPMNPPKYDKIEDMAMMTHLHEPAVL
YNLKERYAAWMIYTYSGLCVTVNPKWLPVYNAEVVTAYRGKKRQEAPP
20 HIFSISDNAYQFMLTDRENQSILITGESGAGKTVNTRVIQYFATIAVTGEKKK
EEVTSGKMQGTLEDQIISANPLLEAFGNAKTVRNDNSSRFGKFIRIHFGTTGKL
ASADIETYLLEKSRVTFQLKAERSYHIFYQIMSNKKPDLIEMLLITNPDYAF
VSQGEITVPSIDDQEELMATDSAIEILGFTSDERSIYKLTGAVMHYGNMKFK
QKQREEQAEPDGTVEADKAAYLQNLNSADLLKALCYPRVKVGNFYVTKGQ
25 TVQQVYNAV GALAKAVYDKMFLWMVTRINQQLDTKQPRQYFIGVLDIAGFE
IFDFNSLEQLCINFTEKLQQFFNHMHFVLEQEYKKEGIEWTFIDFGMDLAA
CIELIEKPMGIFSILEEECMFPKATDTSFKNKLYEQHLGKSNNFQKPKPAKGKP
EAHFSLIHYAGTVDYNIAGWLDKNKDPLNETVVGLYQKSAMKTLALLFVGA
TGAEAEAGGGKKGKKKGSSFTVSALFRENLNKLMTNLRSTHPPHVRCIIP
30 NETKTPGAMEHELVLHQLRCNGVLEGIRICRKGFP SRILYADFKQRYKVLNAS
AIPEGQFIDSKKASEKLLGSIDIDHTQYKFGHTKVFFKAGLLGLEEMRDEKL
AQLITRTQAMCRGFLARVEYQKMVERRESIFCIQYNVRAFMNVKHWPWMKL
YFKIKPLLKSAETEKEMANMKEEFKTEELAKTEAKRKELEEKMTLMQE
KNDLQLQVQAEADSLADAERCDQLIKTKIQLEAKIKEVTERAEDEEEINAEL
35 TAKKRKLEDECESELKKDIDDELTLAKVEKEKHATENKVKNLTEEMAGLDET
IAKLTKEKKALQEAHQQTLDLQAEEDKVNTLTAKIKLEQQVDDLEGSLEQ
EKKIRMDLERAKRKLEGDLKLAQESAMDIENDKQQLDEKLKKKEFEMSGLQ
SKIEDEQALGMQLQKKIKELQARIEELEEIEAERASRAKAEKQRSLSRELEE
ISERLEEAGGATSAQIEMNKKREAEFQKMRRDLEEATLQHEATAATLRKKHA
40 DSV AELGEQIDNLQRVKQKLEKEKSEMMEIDDLASNMETVSKAKGNLEKM
CRALEDQLSEIKTKEEEQQLINDLTAQRARLQTESGEYSRQLDEKDTLVSQ
SRGKQAFQTQIEELKRQLEEEIKAKSALAHALQSSRHDCDLLREQYEEEQEAK
AELQRAMSKANSEVAQWRTKYETDAIQRTTEELEEA KKKLAQRLQDAEEHVE
AVNAK CASLEKTKQRLQNEVEDLMIDVERTNAACAALDKKQRNFDKILAEW
45 KQKCEETHAELEASQKESRSLSTELFKIKNAYEESLDQLETLKRENKNLQQEIS
DLTEQIAEGGKRIHELEKIKKQVEQE KSELQAAL EEAASLEHEEGKILRIQLE
LNQVKSEVDRKIAEKDEEIDQMKRNHIRIVESMQSTLDAEIRSND AIRLKKK
MEGDLNEMEIQLNHANRMAAEALRNYRNTQAILKDTQLHLDDALRSQEDLK
EQLAMVERRANLLQAEIEELRATLEQTERSRIKAEQELLDASERVQLLHTQNT
50 SLINTKKKLETDISQIQGEMEDIQEARNAEEKAKKAITDAAMMAEELKKEQD

TSAHLERMKKNLEQTVKDLQHRLDEAEQLALKGGKKQIQKLEARVRELEGE
VESEQKRNVEAVKGLRKHERKV KELTYQTEEDRKNILRLQDLVDKLQAKVK
SYKRQAEAEQSNVNL SKFRRIQHELEEAEERADIAESQVNKL RVKSREVHT
KIISEE

5

SEQ ID NO: 153

Figure 74- Full-length Amino Acid Sequence (mPPGB)

10 MPGTALSPLLLLLLLSWASRNEAAPDQDEIDCLPGLAKQPSFRQYSGYL RASD
SKHFHYWFVESQNDPKNSPVVLWLNNGPGCSSLDGLLTEHGPFLIQPDGVTLE
YNPYAWNLIANVLYIESPAGVGFSYSDDKMYVTNDTEVAENNYEALKDFFRL
FPEYKDNKLFLTGESYAGIYIPTLAVLVMQDPSMNLQGLAVGNGLASYEQNDN
SLVYFAYYHGLLGNRLWTSLQTHCCAQNKC NFYDNKDPECVNNLLEVSRIVG
15 KSGLNINLYAPCAGGV PGRHRYEDTLVVQDFGNIFTRLPLKRRFPEALMRSG
DKVRLDPPCTNTTAPS NYLNNPYVRKALHIPESLPRWDMCNFLVNLQYRRLY
QSMNSQYLKLLSSQKYQILLYNGD VDMACNFMGDEWFVDSL NQKMEVQRR
PWLVDYGESGEQVAGFVKECSHITFLT IKGAGHMVPTDKPRAAFTMFSRFLN
KEPY

20 **SEQ ID NO: 154**

Figure 75- Full-length Amino Acid Sequence (mZYX)

25 MAAPRPPPAISVSVSAPAFYAPQKKFAPVVAPKPKVNPFRPGDSEPPVAAGAQR
AQMGRVGEIPPPPEDFPLPPPPLIGEGDDSEGALGGAFFFFPPPMIEEPFPAPL
EEDIFSPPPPLEEEGGPEAPTQLPPQPREKVC SIDLEIDSLSSLLDDMTKNDFK
ARVSSGYVPPP VATPFV PKPSTKPA PGGTAPLPPWKTPSSSQPPQPQAKPVQ
LHVQPQAKPHVQPQPVS SANTQPRGPLSQAPTPAPKFAPVAPKFTPVVSKFSPG
APSGPGPQPNQKMVPPDAPSSVSTGSPQPSFTYAQQKEKPLVQEKQHPQPPP
AQNQNQVRSPGGPGPLTLKEVEELEQLTQQLMQDMEHPQRQSVAVNESCGKC
30 NQPLARAQPAVRALGQLFHITCFTCHQCQQQLQGQQFY SLEGAPYCEGCYTD
TLEKNTCGQPITDRMLRATGKAYHPQCFTCVVCACPLEGTSFIVDQANQPHC
VPDYHKQYAPRC SVCSEPIMPEPGRDET VRVVALDKNFHMKCYKCEDCGKPL
SIEADDNGCFPLDGHVLCRKCHSARAQT

35 **SEQ ID NO: 155**

Figure 76- Full-length Amino Acid Sequence (mPRKCABP) (SEQ ID NO: 155)

40 MFADLDYDIEEDKLG IPTVPGKVTLQKDAQNLIGISIGGGAQYCPCLYIVQVFD
NTPAALDGTVAAGDEITGVNGKSIKGTKVEVAKMIQEVKGEVTIHYNKLQA
DPKQGMSLDIVLKKVKHRLVENMSSGTADALGLSRAILCNDGLVKRLEELER
TAELYKGMTEHTKNLLRAFYELSQTHRAFGDVFSVIGVREPQPAASEAFVKFA
DAHRSIEKFGIRLLKTIKPM L TDLNTYLNKAIPDTRLTIKKYLDVKFEYLSYCL
KVKEMDDEEYSCIALGEPLYRVSTGNYEYRLILRCRQEARARFSQMRKDVLE
KMELLDQKHVQDIVFQLQRFVSTMSKYND CYAVLQDADVFP I EVDLAHTTL
45 AYGPNQGSFTDGEEDEEEEDGAAREVSKDACGATGPTDKGGSWCDS

50

SEQ ID NO: 156

Figure 77- Full-length Amino Acid Sequence (mMYLK) (SEQ ID NO: 156)

5 MGDVKLFASSHMSKTSHSVDP SKVSSMPLTEAPAFILPPRNLCVKEGATAKFE
GRVRGYPEPQVTWHRKGQAITNGGRFLDCGVRGTFSLVIHTVREEDKGKYT
CEASNGSGARQVTVELTVEGNSMKKRDQPVLSKASGFPGETRPSIWGECPPK
FATKLGRAVVKEGQMGRFSCKITGRPPPQVTWLKGNVPLQPSARVSMSEKN
GMQILEIRGVTRDDLGVYTCMVVNGSGKASMSAELSIPGLDNAARLAVRGT
10 KAPSPDIRKEVTNGVSKDPETVAESKNCPSPQRS GSSARATNSHLKSPQEPKP
KLCEDAPRKVPQSSILQKSTSTITLQALKVQPEARVPAIGSFSPGEDRKS LAAP
QQATLPT RQSSLGGSVGNKFVTGNIPRESQRESTFPRFESQPQSQEVTEGQTVK
FICEVSGIPKPDVGWFLGIPVRRREGITEVYEDGVSHHLCLLRARTRDSGRYS
CTASNSLGQVSCSWSLLVDRPNLAQTAPSFSSVLKDSV VIEGQDFVLRC SVQG
15 TPAPRVTWLLNGQPIQFAHSICEAGVAELHIQDALPEDRGTYTCLAENAMGQ
VSCSATVT TVQEKKGEGEREHRLSPARSKPIAPIFLQGLSDLKVM DGSQVTMTV
QVSGNPPPEVIWLHDGNEIQESEDHFHEQKGGWHS LCIQEVFPEDTGTYTCEA
WNSAGEVRTRAVLTVQEPHDGTQPWFISKPRSVTATLGQSVLISCAIAGDPFP
TVHWLRDGRALSKDSGHFELLQNEDEVFTLV LKNVQ PWHAGQYEILLKNRVG
20 ECSCQVSLMLHNSPSRAPPRGREPASCEGLCGGGGVGAHGDGDRHGT LRPC
WPARGQGWPEEEDGEDVRGLLKRRVETRLHTEEAIRQQE V GQLDFRDLLGK
KVSTKTVSEDDLKDIPAEQMDFRANLQRQVKPTISEEERKVHSPQQVDFRS
VLAKKGTPKTPVPEKAPPKAATPDFRSVLGGKKKSPSENGGNSAEVLNVKAG
ESPTPAGDAQAIGALKPVGNAPKPAETPKPIGNAKPTETLKPVGNTKPAETLKPI
25 ANAQPSGSLKPVTNAQPAEPQKPVGNAKSAETSKPAGKEEVKEVKNDVNCK
KGQVGATGNEKRPESQGSAPVFKEKLQDVHVAEGEKLLLQCQVISDPPATVT
WSLNGKTLKTTKFIVLAQEGSRFSVSIEKALPEDRG LYKCVAKNSAGQAECSC
QVTVDDAQTSENTKAPEMKSRRPKSSLPPVLGTESDATVKKKPAKTPTKAA
MPPQIIQFPEDQKVRAGEPVELFGKVAGTQPITCKWMKFRKQIQESEHIKVEN
30 GESGSKLTIL AARQEHCGCYTLVVENKLGSRQAQVNLT VVDKPDPPAGTPCA
SDIRSSSLT LSWYGSSYDGGSAVQSYNVEIWDTE DKVWKELATCRSTS FNVQ
DLLPDREYKFRVRAVNVYGTSEPSQESELTA VGEKPEEPKDEVEVSDDDEKE
PEVDYRTVTVNTEQKVSDVYDIEERLGS GKFQVFRLVEKKTGKIWAGKFFK
AYSACEKDNIRQEISIMNCLHHPKLVQCVD AFEEKANIVMVLE
35

SEQ ID NO: 157

Figure 78- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of SEQ ID NO: 7 (1098 nucleotides in total)

40 5'-GACCTGAAGGCCACGCTGAACTCTGGCCCAGGCGCCCAGCAGAAGGAG
ATCGGAGAGTTGAAGGCCCTGGTAGAGGGCATCAAGATGGAGCACCAGC
TGGAGTTAGGTAACCTGCAGGCCAAGCACGACTTGGAGACGGCCATGCAT
GGGAAGGAGAAGGAGGGCCTGCGGCAGAAGCTGCAAGAGGTCCAGGAGG
AGCTGGCCGGGCTGCAGCAGCACTGGAGGGAGCAGCTGGAGGAGCAGGC
45 CAGCCAGCATCGGCTGGAGCTCCAAGAAGCCCAGGACCAATGTCGCGACG
CCCAGCTGCGCGCGCAGGAGCTAGAGGGACTGGATGTGGAGTACCGTGGC
CAGGCTCAAGCCATCGAGTTCCTCAAAGAGCAGATCTCACTGGCTGAAAA
GAAGATGCTAGATTACGAGATGCTGCAGAGGGCCGAAGCCCAGAGCAGG
CAGGAGGCCGAGCGGCTGCGGGAAAAGCTTCTGGTGGCTGAGAATAGAC
50 TCCAGGCCGCGGAGTCCCTGTGCTCAGCCAGCACAGCCATGTGATCGAA

TCCAGTGACCTTTCTGAGGAGACAATTCGGATGAAGGAGACTGTAGAGGG
CCTGCAGGACAAGCTGAACAAGAGGGACAAAGAGGTGACAGCCTTGACA
TCCCAGATGGACATGCTCAGGGCCCAAGTAAGTGCTCTAGAAAACAAGTG
CAAATCAGGAGAGAAGAAGATAGATTCTCTCCTGAAGGAGAAGAGGCGC
5 CTAGAGGCAGAGCTGGAGGCTGTGTCTCGGAAGACCCACGATGCCTCCGG
CCAGCTGGTCCACATCAGCCAGGAGTTGCTGCGGAAAGAGAGGAGTCTGA
ACGAGCTGAGGGTGTGCTGTTAGAAGCCAATCGCCACTCCCCAGGGCCC
GAGAGAGACCTGAGCCGTGAAGTACACAAAGCTGAATGGCGGATAAAGG
AACAGAACTGAAGGATGACATCCGGGGCCTGCGTGAGAAGCTGACCGG
10 GCTGGACAAGGAGAAGTCCCTATCAGAGCAGAGACGCTACTCCCTCATTG
ACCCAGCTTCACCACCCGAGCTGCTGAACTGCAGCATCAGTTGGTGAGC
ACGGAAGAC-3'

SEQ ID NO: 158

15 **Figure 79- Partial cDNA Nucleotide Sequence Encoding the Amino Acid
Sequence of SEQ ID NO: 10 (SEQ ID NO: 158) (591 nucleotides in total)**

5'-GAGAAAGGAATCAAACCTGCTGCAGGCACAGAAGCTGGTGCAGTATTTG
CGGGAGTGTGAGGATGTAATGGACTGGATCAATGACAAGGAAGCAATTGT
20 GACTTCTGAGGAGCTGGGCCAGGACCTGGAGCATGTAGAGGTGCTACAGA
AGAAGTTTGAAGAGTTTCAGACTGATCTGGCTGCTCATGAAGAAAGAGTT
AATGAAGTGAGCCAGTTTGTGCTGCCAACTCATCCAGGAGCAGCACCCGGA
AGAGGAGCTGATCAAGACCAAGCAGGATGAGGTGAATGCAGCATGGCAG
CGACTGAAAGGCCTGGCTCTTCAAAGGCAGGGCAAGCTGTTCCGGTGCTGC
25 TGAGGTCCAGCGCTTTAACAGGGATGTAGATGAGACCATTGGTTGGATTA
AGGAGAAAGAGCAGTTAATGGCCTCTGATGACTTCGGCAGAGACTTAGCA
AGTGTTCAGCTCTGCTTCGAAAGCATGAGGGTCTGGAGAGAGATCTTGC
TGCTCTAGAGGACAAGGTGAAAGCCCTGTGTGCTGAGGCTGACCGCCTGC
AACAGTCACACCCTCTGAGTGCCAGCCAGATCCAGGGGAAGCGA-3'

30

SEQ ID NO: 159

**Figure 80- Partial cDNA Nucleotide Sequence Encoding the Amino Acid
Sequence of SEQ ID NO: 19 (375 nucleotides in total)**

35 5'-GACGATGCCGCCGTGGAGACAGCTGAGGAAGCAAAGGAGCCTGCTGA
AGCTGACATCACTGAGCTCTGCCGGGACATGTTCTCCAAAATGGCCACTT
ACCTGACTGGGGAACTGACGGCCACCAGTGAAGACTATAAGCTCCTGGAA
AATATGAATAAACTCACCAGCTTGAAGTATCTTGAAATGAAAGATATTGC
TATAAACATTAGTAGGAACTTAAAGGACTTAAACCAGAAATATGCTGGAC
40 TGCAGCCTTATCTGGATCAGATCAATGTCAATTGAAGAGCAGGTAGCAGCT
CTTGAGCAGGCAGCTTACAAGTTGGATGCATATTCAAAAAAAGTGAAGC
CAAGTACAAGAAGCTGGAGAAGCGATGA-3'

NH2-MAGGEDRGDGEPVSVVTVRVQYLEDTPFACANFPEPRRAPTCSLDGA
 5. LPLGAQIPAVHRLLGAPLKLEDCALQVSPSGYYLDTELSLEEQREMLEGFYEEI
 SKGRKPTLILRTQLSVRVNAILEKLYSSSGPELRRSLFSLKQIFQEDKDLVPEFV
 HSEGLSCLIRVGAAADHNYQSYILRALGQLMLFVDGMLGVVAHSDTIQWLYT
 LCASLSRLVVKTALKLLLVFVEYSENNAPLFIRAVNSVATTTGAPPWANLVSILE
 EKNAGDPELLVYTVTLINKTLAALPDQDSFYDVTDALEQQGMDTLVQRHLGT
 10 AGTDVDLRTQLVLYENALKLEDGDIEEAPGAGGRRERRKPSSEEGKRSRRSLE
 GGGCPARAPEPGPTGPASPVGPTSSTGPALLTGPA SSPVGPPSGLQASVNLFP
 TVI SVAPSADTSSERSIYKARFLENVAAAETEKQVALAQGRAETLAGAMPNEAGG
 HPDARQLWDSPETAPAARTPQSPAPCVLLRAQRSLAPEPKEPLIPASPKAEPIW
 ELPTRAPRLSIGDLDFSDLGEDEDQDMLNVESVEAGKDIPAPSPPLPLLSGVPP
 15 PPPLPPPPPIKGPFPPLPLAAPLPHSVDPSSALPTKRKTVKLFWRDVKLAGG
 HGV SASRFGPCATLWASLDPVSVD TARLEHLFESRAKEVLPSKKAGEGRRTM
 TTVLDPKRTNAINIGLTTLPPVHV IKAALLNFDEFVSKDGIEKLLTMMPTTEE
 RQKIEGAQLANPDIP LGPAENFLMTLASIGGLAARLQLWAFKLDYDSMEREIA
 EPLFDLKVGMEQLVQNATFR CILATLLAVGNFLNGSQSSGFELSYLEKVSDVK
 20 DTVRRQSL LHLC SLVLQTRPESSDLYSEIPALTRCAKVD FEQLTENLGQLERR
 SRAAEESLRSLAKHELAPALRARLTHFLDQCARRVAMLRIVHRRVCNRFHAF
 LYLGYTPQAAREVRIMQFCHTLREFALEYRTC RERVLQQQKQATYRERNKT
 RGRMITETEFSGVAGEAPSNPSVPVAVSSGPGRGDADSHASMKSLTSRLED
 TTHNRRSRGMVQSSSPIMPTVGPSTASPEEPPGSSLPSDTSDEIMDLLVQSVTKS
 25 SPRALAAERERKRSRGNR KSLRRTLKSGLGDDL VQALGLSKGPGLEV
 -COOH

Figure 1- Full-length Amino Acid Sequence (FHOS) (SEQ ID NO: 27)

NH2-MAETSLLEAGASAASTAAALENLQVEASCSVCLEYLKEPVIIIECGHNFC
KACITRWWEDLERDFPCPVCRKTSRYRSLRPNRQLGSMVEIAKQLQTVKRKI
RDESLCSQHHEPLSLFCYEDQEAVCLICAISHTHRPHTVVPMDATQEYKEKL
QKCLEPLEQKLQEITCCKASEEKKPGELKRLVESRRQQILKEFEELHRRLEDEEQ
5 QTLLSRLEEEEQDILQRLRENA AHLGDRRRDLAHLAAEVEGKCLQSGFEMLK
DVKSTLEKCEKVKTMEVTSVSIELEKNFSNFPRQYFALRKILKQLIADVTLDP
TAHPNLVLSEDRKSVK FVETRLRDL PDTPQRFTFYPCVLATEGFTSGRHYWEV
EVGDKTHWAVGVCRDSVSRKGELTPLPETGYWRVRLWNGDKYAATTPFTPL
HIKVKPKRVGIFLDYEAGTLSFYNVTD RSHIYTFTDTFTEKLWPLFYPGIRAGR
10 KNAAPLTIRPPTDWE
-COOH

Figure 2-Full-length Amino Acid Sequence (mRNF23) (SEQ ID NO: 28)

NH2-MLSRALLCLALAWAARVGADALEEEDNVLVLKKS NFEEALAAHKYLLV
EFYAPWCGHCKALAPEYAKAAAKLKAEGSEIRLAKVDATEESDLAQQYGVR
GYPTIKFFKNGDTASPKEYTAGREADDIVNWLKKRTGPAATTLSDTAAAESLV
DSSEVTVIGFFKDVESDSAKQFLLAEEAIDDIPFGITSNSGVFSKYQLDKDGVV
5 LFKKFDEGRNNFEGEITKEKLLDFIKHNQLPLVIEFTEQTAPKIFGGEIKTHILLF
LPKSVSDYDGLSSFKRAAEGFKGKILFIFIDSDHTDNQRILEFFGLKKEECPAV
RLITLEEEMTKYKPESDELTAEKITEFCHRFLEGKIKPHLMSQEVPEWDKQPV
KVLVGANFEEVAFDEKKNVFVEFYAPWCGHCKQLAPIWDKLGETYKDHENIII
AKMDSTANEVEAVKVHSFPTLKFFPASADRTVIDYNGERTLDGFKKFLESGGQ
10 DGAGDDEDLDLEEALPDMEEDDDQKAVKDEL
-COOH

Figure 3- Full-length Amino Acid Sequence (mERp59) (SEQ ID NO: 29)

NH2-MGKKHKKHKSDRHFYEEYVEKPLKLVLKVGGSEVTELSTGSSGHDSSL
FEDRSDHDKHKDRKRKKRKKGEKQAPGEEKGRKRRRVKEDKKKRDRDRAE
NEVDRDLQCHVPIRLDLPPEKPLTSSLAKQEEVEQTPLQEALNQLMRQLQSTM
KEKIKNNDYQSIEELKDNFKLMCTNAMIYNKPETIYYKAAKKLLHSGMKILS
5 QERIQSLKQSIDFMSDLQKTRKQKERTDACQSGEDSGCWQREREDSGDAETQ
AFRSPAKDNKRKDKDVLEDKWRSSNSEREHEQIERVVQESGGKLTRRLANSQ
CEFERRKPDGTTTLGLLHPVDPIVGEPGYCPVRLGMTTGRLQSGVNTLQGFK
DKRNRVTPVLYLNYGPYSSYAPHYDSTFANISKDDSDLIYSTYGEDSDLPNNFS
ISEFLATCQDYPYVMADSLLDVLTGKGHSRSLQDLDMSSPEDEGQTRALDTA
10 KEAEITQIEPTGRLESSSQDRLTALQAVTTFGAPAEVFDSEEAEVFQRKLDETTR
LLRELQEAQNERLSTRPPPNMICLLGPSYREMYLAEQVTNNLKELTQQVTPGD
VVSIHGVRKAMGISVPSPIVGNSFVDLTGECEEPKETSTAECGPDAS
-COOH

15 Figure 4- Full-length Amino Acid Sequence (mBRD7(621)) (SEQ ID NO: 30)

NH2-METPKETAIVSSGPKVLETAEEIQHRAEVLNQYQRFKDRVAERGQKLE
ESYHYQVFRRDADDLEK WIMEKLEIAKDKTYEPTNIQQGKYQKHESFVSEVQA
KSRVLPLEEIREARFAEDHFAHEATKTHLKQLRLLWDLLELTQEKS DVLLR
5 ALKFYQYSQECEDILEWVKEKEAIVTLVELGDDWERTEVLHKKFEEFQEELTA
RKGKVDRVNQYANECAQEKHPKLPEIKAKQDEVNAAWDR LWSLALKRRESL
SNAADLQRFKRDVNEAIQWMEEKEPQLTSEDYGKDLVSSEALFHNHKLRLRN
LAVMDDKV KELCAKADKLMISHSADAPQIQQM KLDLVS NWERIRALATNRY
AKLKASYGYHRFLSDYDELSGWMKEKTALINADELPTDVASGEALLARHQQ
HKHEIDSYDDR FQSADATGQELLDGNHEASEEIREKMTILANDWAALLELWD
10 KCQHQRQCLDFHLFYRDSEQVDSWMSRQEAFLNEDLGNSVGSVEALLQK
HDDFEEAFTAQEEKIITLDETATKLIDNDHYDSENIAAIRDGLLARRDALRERA
ATRRKLLVDSQLLQQLYQDSDDLKTWINKKKKLADDDDYKDVQNLKSRVQK
QQDFEEELAVNEIMLNNLEKTGQEMIEDGHYASEAVAARLSEVANLWKELLEA
TAQKGTQLYEANQLLQFENNAEDLKRWLEEVWQVTSEDYGKGLADVQNL
15 LRKHGLLES DVTARQNQVDTLTDMAAHFEEIGHPD SGDIRARQESLLSRFEAL
KEPLAIRKKKLIDLLKLQQICRDEDEEAWIQETEPSAASTHLGKDLVAAKNLL
NRHEVILADIASHEPRIQVITERGNKMVEEGHF AAEDIASRVESLNKNMESLH
ARAIRRENDLKANVQLQQYLADLHEAEAWIKEKEPIVDNKNYGADEEAAGA
LLKKHEAFLVDLNAFENSIKALRDQAEVCQQQQAAPVDEAGREARVIALYDF
20 EARSRREVS MKKNDVLTLLSSINKDWWKVEAD DHQGFVPAVYVRKLAPDEL
PGFPQHRQE EPVNIPQLQQQVETLYHSLLDRAEERRRRL LQRYNEFLLAYEAG
DMLEWIQEKKTENTGVELDDVWELQKKFDEFQRDLKSNEPRLKDINKVADE
LLFEELLTPEGAHIRQELNTRWNSLKR LADEQYQLLSSAHAVEMF HREADDV
KEQIDKKCRALNAADPGSDLLSVQALQRQHEVFERDI IPLGEKVTTLGETAER
25 LCESHPDATEDLQQRTELNEAWDTLQGLTSDR KESLNEAHKFFLFLSKASDL
ENWIKTIGGVISSPELAEDLTGTEILLERHQEHDDIKREDPTFQALEDFGT ELI
DSGHRNRREIDNTLQNINSKRDNLEKSWENRKKMLDQCLELQLFRGKCDQV
ESWMVARENSLRSDDRDHLNSLQALMKKRDDL DKAITAQEGKISDLENVATR
LIDNDHYAKEEIAARLQRVLD RWKALKEQLLTELGKLG DYADLKQFYRDLED
30 LEEWINEMPLIACDESYKDPTNIQRKYLKHQAFENEVNGRAEQVDGVINLGN
SLIERRVCDGDEENMQEQLDK LKENWDYLLERTTDKGQKLNEASRQQRFNT
SIRDFEFWLSEAEGLLAMKDQARDLTSAGNLLKKHQLLEAEM LAREDPLKDL
NDLAQELISSGTFNIDQIEEKMNGVNERNFENVQSLAAAHHEK LKETYALFQFF
QDLDDDEEAWIEEKL LRVSSQDYGRDLQSVQNL LKKHKRLEGELVAHEPAVQN
35 VLDTAESLRDKAAVGKEEIQERLAQFVQHWEK LKELAKTRGVNLEESLEYLQ
FMENAE EEEAWLGEKCALVSRGDSGDTLAATQSL LKKHEALENDFAVHKNRV
QDVCAQGEDILNKEETQNKDKISTKIQVLNEKTASLAKALAAWKSQ LDDVHA
FQQFNWKADV VESWIGEKEASLKT KSNAGDLTAFLTL LAKHDTLDASLQSFQ
QERLSEIAELKDQLVAGEHSQAKAIEEQHAALLRHWEQLLEASRVHRQK LLE
40 KQLPLQKAEELFMEFAHKASAFNNWCENAEEDLSEPVHCVSLNEIRQLQKEH
EAFLASLAGAQEDFN YLLELDKQIKALNVPSSPYTWLTVDVLGRIWNHLPDII
KEREQELQKEEARQIKNFEMCQEF EQNASAF LQWIQETR AYFLDGSLLKETGT
LESQLEANKRKQKEIQAMKRHLTKIEDLGDSMEEALILDIKYSTIGLAQQW DQ
LHQLGMRMQHNLEQQIQAKDTIGVSEETLKEFSTTYKHFDENLTGR LTHKEF
45 RSCLRGLNYYLPMVEEGEPEPKFEKFLNAVDPGRKGYVSLEDYTSFLIDKESE
NIKTSDDIESAFQALAE GKAYITKEDMKQALTPEQVSFCTIHMQQYMDPRGRS
QPAGYDYVGFTNSFFGN -COOH

Figure 5- Full-length Amino Acid Sequence (mSPNA1) (SEQ ID NO: 31)

NH2-MASGADSKGDDLSTAILKQKNRPNRLIVDEAINEDNSVVSLSQPKMDEL
QLFRGDTVLLKGKKRREAVCIVLSDDTCSDEKIRMNRVVRNNLRVRLGDVISI
QPCPDVKYKGKRIHVLPIDDTVEGITGNLFEVYLKPYFLEAYRPIRKGDIFLVRG
GMRAVEFKVVETDPSPYCIVAPDTVHCEGEPIKREDEEESLNEVGYYDDVGGC
5 RKQLAQIKEMVELPLRHPALFKAIGVKPPRGILLYGPPGTGKTLIARAVANETG
AFFFLINGPEIMSKLAGESNLRKAFEEAEKNAPAIIFIDELDAIAPKREKTHG
EVERRIVSQLLTLMMDGLKQRAHVIVMAATNRPN SIDPALRRFGRFDREVDIGIP
DATGRLEILQIHTKNMKLADDVDLEQVANETHGHV GADLAALCSEAALQAIR
KKMDLIDLEDETIDAEVMNSLAVTMDDFRWALSQSNPSALRETVVEVPQVTW
10 EDIGGLEDVKRELQELVQYPVEHPDKFLKFGMTPSKGVLFYGP PGCGKTLLA
KAIANECQANFISIKGPELLTMWFGSEANVREIFDKARQAAPCVLFFDELDSI
AKARGGNIGDGGGAADRVINQILTEMDGMSTKKNVFII GATNRPDIIDPAILRP
GRLDQLIYIPLPDEKSRVAILKANLRKSPVAKDVDLEFLAKMTNGFSGADLTEI
CQRACKLAIRESIESEIRRERERQTNPSAMEVEEDDPVPEIRRDHFEEAMRFAR
15 RSVSDNDIRKYEMFAQTLQQSRGFGSFRFPSGNQGGAGPSQGS GG GTGGSVY
TEDNDDDLYG
-COOH

Figure 6- Full-length Amino Acid Sequence (mVCP) (SEQ ID NO: 32)

NH2-MAGWIQAQQLOGDALRQMQVLYGQHFPPIEVRHYLAQWIESQPWDAID
LDNPQDRGQATQLLEGLVQELQKKAEHQVGEDGFLLKIKLGHYATQLQNTYD
RCPMELVRCIRHILYNEQRLVREANNCSSPAGVLVDAMSQKHLQINQRFEELR
LITQDTENELKKLQQTQEYFIIQYQESLRIQAQFAQLGQLNPQERMSRETALQQ
5 KQVSLETWLQREAQTLQQYRVELAEKHQKTLQLLRKQQTIILDDELIQWKRR
QQLAGNGGPPEGSLDVLQSWCEKLAELIWNRRQQIRRAEHLCCQLPIGPVEE
MLAEVNAITITDIISALVTSTFIIKQPPQVLKTQTKFAATVRLLVGGKLVNVMN
PPQVKATHISEQQAKSLLKNENTRNECSGEILNNCCVMEYHQATGTLSAHFRN
MSLKRIKRADRRGAESVTEEKFTVLFESQFSVGSNELVFQVKTLPLPVVIVH
10 GSQDHNATATVLWDNAFAEPGRVPFAVPDKVLWPQLCEALNMKFKAQVQSN
RGLTKENLVFLAQKLFNISSNHLEDYNSMSVSWSQFNRENLPGWNYTFWQW
FDGVMEVLKKHHKPHWNDGAILGFVNKQQAHDLLINKPDGTFLFRSDSEIG
GITIAWKFDSPDRNLWNLKPFTTRDFSIRSLADRLGDLNYLIYVFPDRPKDEVF
15 QPHYNMYPPNPDPVLDQDGEFDLDESMDVARHVEELLRRPMDSLDARLSPPA
GLFTSARSSL
-COOH

Figure 7- Full-length Amino Acid Sequence (mSTAT5A) (SEQ ID NO: 33)

NH2-AIVERRANLLRAEIEELRATLEQTERSRIKIAEQELLDASERVQLLHTQNTS
LINTKKKLENDVSQLQSEVEEVIQESRNAEEKAKKAITDAAMMAEELKKEQD
TSAHLERMKKNME
-COOH

5

Figure 8- Partial Amino Acid Sequence (mTAKEDA009) (SEQ ID NO: 10)

NH2-MEDVTLHIVERPYSGFPDASSEGPPTQGEARATEEPSGTGSDELIKSDQ
VNGVLVLSLLDKIIGAVDQIQLTQAQLEERQAEMEGAVQSIQGELSKLGKAHA
TTSNTVSKLLEKVRKVS VNVKTVRGS LERQAGQIKKLEVNEAELLRRRNFKV
MIYQDEVKLPKLSVSKSLKESEALPEKEGDELGEGERPEDDTAAIELSSDEAV
5 EVEEVIEESRAERIKRSGLRRVDDFKKAFSKEKMEKTKVRTRENLEKTRLKTK
ENLEKTRHTLEKRMNKLGTRLVPVERREKLKTSRDKLRKSFTPDHV VYARSK
TAVYKVP PFTFHVKKIREGEVEVLKATEMVEVGPEDDEVGAERGEATDLLRG
SSPDVHTLLEITEESDAVLVDKSDSD
-COOH

10

Figure 9- Full-length Amino Acid Sequence (mPTRF) (SEQ ID NO: 34)

NH2-MLLSPKFSLSTIHVRLTAKGLRNLRLPPGLRKNTVIFHTVEKGRQKNPRS
LCIQTTAPDVLSSERTLELAQYKTKCESQSGFILHLRQLLSRGNTKFEALTVVI
QHLLSEREEALKQHKTLSQELVSLRGELVAASSACEKLEKARTDLQTAYQEFV
QKLNQQHQTDRTLENRLKDLYTAECEKLQSIYIEEAKEYKTQLQEQFDNLN
5 AAHETTKLEIEASHSEKVELLKKTYETSLSEIKKSHEMEKKSLLEDLLNEKQESL
EKQINDLKSENDALNERLKSEEKQLSREKANSKNPQVMYLEQELESKAVL
EIKNEKLHQQDMKLMKMEKLVDNNTALVDKLRFRQQENEELKARMDKHMA
ISRQLSTEQAALQESLEKESKVNKRLSMENEELLWKLHNGDLCSPKRSPTSSAI
PFQSPRNSGSFSSPSISPR
10 -COOH

Figure 10- Full-length Amino Acid Sequence (mAK031693) (SEQ ID NO: 35)

NH2-MSGVLVGQRDEPAGHRLSQEEILGSTKVVSQGLEALHSEHQAVLQSLSH
TIECLQQGGHEEGLVHEKARQLRRSMENIELGLSEAQVMLALASHLSTVESEK
QKLRAQVRRLCQENQWLRDELAGTQQRLQRSEQAVAQLEEEKKHLEFLRQL
RQYDEDGHGMEEKEGEATKDSLDDLFPNEEEEDSGNDLSRGQGAAAAQQGG
5 YEIPARLRTLHNLVIQYAAQGRYEVAVPLCKQALEDLERTSGRGHPDVATMLNI
LALVYRDQNKYKEAAHLLNDALSIRESTLGRDHPAATLNNLAVLYGKR GK
YKEAEPLCQRALEIREKVLGTDHPDVAKQLNNLALLCQNQGKYEAVERYYQ
RALAIYESQLGPDNPNVARTKNNLASCYLKQGKYSEAEALYKEILTCAHVQEF
GSVDDDDHKPIWMHAEEREEMSRSRPRDSSAPYAEYGGWYKACRVSSPTVNT
10 TLKNLGALYRRQGKLEAAETLEECALRSRKQGTDPISQTKVAELLGEGDGRK
AIQEGPGDSVKFEGGEDASVAVEWSGDGSGTLQRSGSLGKIRDVLRSSSELLV
RKLQGT EPRPSSSSMKRAASLNYLNQPNAAPLQVSRGLSASTVDLSSSS
-COOH

15 Figure 11- Full-length Amino Acid Sequence (m1200014P03Rik) (SEQ ID NO: 36)

NH2-MVPGVPLPPEIQLAQRLAGNEQVTRDRALRKLRKYIEARSQRATGGFTP
DELLKVWKGLFYCMWMQDKPLQQEELGRTIAQLVHAFHTTEAQHQFLKAF
WQTMIREWVGIDRLRLDKFYMLMRMVLSESLKAVKARGWDERQIEQLLELL
TTEILNPDSQAPSGVKSHFLEIFLEELAKVGAAELTADQNLQFIDPFCQIAARTK
5 DSQVLHKIIQSIFQTIVEQAPLAIEDIMNELDTQSGEGEASDGDDGEASDGDDG
EASDDDDGEASDGGDGDVADSDDSDGADDDDDGDVSDGDGGDNDEGDSNKS
SEGEQDLQDTPPKKLPAHTAHRAHAGPEADKEQAWDDEENAGPVLQFDYEALA
NRLFKLASRQSTPSQNRKRLYKVIQKLRELAGGTFPEDDVPEKAYKKMLEGR
RERKKKKKRLPKPQPQNKEAGSEAESSADPGPGRKRKRNRKTDEKAGQGG
10 PPGKRRKPGARAKGAGAAQPPKKRIQSSQSAE
-COOH

Figure 12- Full-length Amino Acid Sequence (mNNP1) (SEQ ID NO: 37)

NH2-RRVKDDAAAHIA⁵SLKASHEREIEKLLCQNAIENSSSKVAELNRKIATQEV
LLKHFQGGQVNELQGKQESLAVSQVREEILQKQITKLEELKEAKENHTPEMK
HFMGLERKIKQMEMRHRQREQELQQIIQQTRQVVETEQNKEVEKWKRLAQL
KNRELDKFRTELD⁵SILDVLRELHRQGVVVPMALAGEENTA⁵EF
-COOH

Figure 13- Partial Amino Acid Sequence (mLOC213473(195)) (SEQ ID NO: 15)

NH2-MDGASAKQDGLWESKSSSDVSSCPEASLETVGSLARLPDQQDTAQDAS
 VEVNRRGFKEEGSPDRSSQVAICQNGQIPDLQLSLDPTTSPVGPDASTGSTASSL
 PLEKEEQVRLQARKRLEEQLMQYRVKRRHRERSSQPATKMKLFSTLDPPEMLN
 PENLPRASTVAVTKEYSFLRTSVPRGPKVGSGLLAHSKEKKNSKSSKIRSLAD
 5 YRTEDPSDSGGLGSTADAVGSSLKQSRSSTSVVSEVSPSSETDNRVESASMTGD
 SVSEADGNESDSSSHSSLSARGACGVLGNVGMPTAYMVDGQEISAEALGQF
 PSIKDVLQAAAAQHQQDQNEANGEVRSRRDSICSSVSMESSLAEPQDELLQIL
 KDKRRLEGQVEALSLEASQALQEKAELQAQLAALSTRLQAQVEHSHSSQQK
 QDSLSSEVDTLKQSCWDLGRAMTDLQSMLEAKNASLASSNNDLQVAEEQYQ
 10 RLMKVEDMQRNILSKDNTVHDLRQQMTALQSQLQQVQLERTTLTSLKLQAS
 QAEITSLQHARQWYQQQLTLAQEARVRLQGETAHIQVGQMTQAGLLEHLKL
 ENVSLSHQLTETQHRSIKEKERIAVQLQSIEADMLDQEAAFVQIREAKTMVEE
 DLQRRLEEFEGEREQLQKVADAAASLEQQLEQVKLTLFQRDQQLAALQQEHL
 DVIKQLTSTQEALQAKGQSLDDLHTRYDELQARLEELQREADSREDAIHFLQN
 15 EKIVLEVALQSAKSDKEELDRGARRLEEDTEETSGLLEQLRQDLAVKSNQVEH
 LQQETATLRKQMQKVKEQFVLQKVMVEAYRRDATSKDQLINELKATKKRLD
 SEMKELRQELIKLQGEKKTVEVEHSRLQKDMSLVHQQMAELEGHLQSVQKE
 RDEMEIHLQSLKFDKEQMIALTEANETLKKQIEELQQEAKKAITEQKQKMKR
 LGSDLTSAQKEMKTKHKAYENAVSILSRRLQEALASKEATDAELNQLRAQST
 20 GGSSDPVLHEKIRALEVELQNVGQSKILLEKELQEVITMTSQELESREKVLEL
 EDELQESRGFRRKIKRLEESNKKLALALEHERGKLTGLGQSNAALREHNSILET
 ALAKREADLVQLNLQVQAVLQRKEEEDRQMKQLVQALQVSLEKEKMEVNSL
 KEQMAAARIEAGHNRRHFKAATLELSEVKKELQAKEHLVQTLQAEVDELQIQ
 DGKHSQEIAQFQTELAEARTQLQLLQKKLDEQMSQQPTGSQEMEDLKWELD
 25 QKEREIQSLKQQLDLTEQQGKKELEGTQQTLQTIKSELEMVQEDLSETQKDKF
 MLQAKVSELKNNMKTLLQQNQQLKLDLRRGAACKKEPKGESNSSSPATPIKI
 PDCVPASLLEELLRPPPAVSKEPLKNNCLQQLKQEMDSLQRQMEEHTITV
 HESLSSWAQVEAAPAEHAHPRGDTKLHNQNSVPRDGLGQ
 -COOH
 30

Figure 14- Full-length Amino Acid Sequence (mGOLGA3) (SEQ ID NO: 38)

NH2-MGRRFLRGILTPLRSVLQAQHRMLGSEQDPPAKRPRNNLMAPPRIGTH
NGTFHCDEALACALLRLLPEYANAEIVRTRDPEKLASCDIVVDVGGEYNPQSH
RYDHHQRTFTETMSSLCPGKPWQTKLSSAGLVYLFHGRKLLAQLLGTSEEDS
VVDTIYDKMYENFVEEVDAVDNGISQWAEGEPRYAMTTTLSARVARLNPTWN
5 QPNQDTEAGFRRAMD LVQEEFLQRLNFYQHSWLPARALVEEALAQRFKVDSS
GEIVELAKGGCPWKEHLYHLESELSPKVAITFVIYTDQAGQWRVQCVPEPHS
FQSRLPLPEPWRGLRDKALDQVSGIPGCFVHASGFIGGHHTREGALNMARAT
LAQRPAVPPLANAVVQ
-COOH

10

Figure 15- Full-length Amino Acid Sequence (mMYG1-pending) (SEQ ID NO: 39)

NH₂-MSSQSMKLPPSNSALPNQALGSIAGLGTQNLNSVRQNGNPNMFGVGNT
AAQPRGMQQPPAQPLSSSQPNLRAQVPPPLSPQVPVSLLKYAPNNGGLNPLF
GPQQVAMLNQLSQLNQLSQISQLQRLLAQQQRAQSQRSAPSANRQQQDQQG
RPLSVQQQMMQQSRQLDPSLLVKQQTTPPSQQPLHQPAMKSFLDNVMPHTTPE
5 LQKGPSPVNAFSNFPIGLNSNLNVNMDMNSIKEPQSRLRKWTTVDSMSVNTS
LDQNSSKHGAISSGFRLEESPFVPHYDFMNSSTSPASPPGSIGDGWPRAKSPNGS
SSVNWPPEFRPGEPWKGYPNIDPETDPYVTPGSVINSLSINTVREVDHLRDRNS
GSSSSLNTTLPSTSAWSSIRASNYNVPLSSTAQSTSARNSDSKLTWSPGSVTNTS
LAHELWKVPLPPKNITAPSRPPPGLTGQKPLSTWDNSPLRVGGGWGNSDARY
10 TPGSSWGESSSGRITNWLVLKNLTPQIDGSTLRITLCMQHGPLITFHLNLPHGNA
LVRYSSKEEVVKAQKSLHMCVLGNTTILAEFASEEEISRFFAQSQSLTPSPGWQ
SLGSSQSRLGSLDCSHSFSSRTDVNHWNAGLSGANCGDLHGTSLWGTPHYS
TSLWGPPSSDPRGISSPSPINAFLSVDHLGGGGESM
-COOH

15

Figure 16- Partial Amino Acid Sequence (mAK044679(668)) (SEQ ID NO: 40)

NH₂-MSVAGGEIRGDTGGEDTAAPGRFSFSPEPTLEDIRRLHAEFAAERDWEQF
HQPRNLLLALVGEVGEAELFQWKTDGEPGPQGWSRERAALQEELSDVLIY
LVALAARCRVDLPLAVLSKMDINRRRYPAHLARSSSRKYTELPHGAISEDQAV
GPADIPCDSTGQTST

5 -COOH

Figure 17- Full-length Amino Acid Sequence (RS21C6) (SEQ ID NO: 41)

NH₂-MPHKIGFVVVSSSGHEDGFSARELMIHAPT VSGWRSRFCQFPQEIVLQM
VERCRIRKLQLLAHQYMISSKIEFYISESLPEYFAPYQAERFRRLGYVSLCDNE
KTGCKARELKSVYVDAVGQFLKLIFHQNHVNKYNIYNQVALVAINIIGDPADF
SDESNTASREKLIDHYLGHNSEDPALEGTYARKSDYISPLDDLAFDMYQDPEV
5 AQIIRKLDERKREAVQKERYDYAKKLKQAIADLQKVGERLG RYEVEKRCAVE
KEDYDLAKEKKQQMEQYRAEVYEQLELHSLDDAELMRRPFDLPLQPLARSG
SPCHQKPMPSLPQLEERG TENQFAEPFLQEKPSYSLTISPQHSAVDPLL PATDP
HPKINAESLPYDERPLPAIRKH YGEAVVEPEMSNADISDARRGGMLGEPEPLTE
KALREASSAIDVLGETLVAEAYCKTWSYREDALLALS KKL MEMPVGTPKEDL
10 KNTLRASVFLVRRRAIKDIVTSVFQASLKLKMIITQYIPKH KLSKLETAHCVER
TIPVLLTRTGDSSARLRVTAANFIQEMALFKEVKSLQIIPSYLVQPLKANSSVHL
AMSQMGLLARLLKDLGTGSSGFTIDNVMKFVS SALEHRVYEVRETAVRIILD
MYRQHQASILEYLPDDSNTRRNILYKTIFEGFAKIDGRATDAEMRARRKAAT
EEAEKQKKEEIKALQGQLAALKEIQAEVQEKESDAVKPKNQDIQGGKAAPAE
15 ALGIPDEHYLDNLCIFCGERSESFTEEGLDLHYWKHCLMLTRCDHCKQVVEIS
SLTEHLLTECDKKDGF GKCYRCSEAVFKEELPRHIKHKDCNPAKPEKLANRCP
LCHENFSPGEEAWKAHLMGPAGCTMNL RKTHILQKAPALQPGKSSAVAASGP
LGSKAGSKIPTPKGGLSKSSSRTYAKR
-COOH
20

Figure 18- Full-length Amino Acid Sequence (KIAA0562) (SEQ ID NO: 42)

NH₂-MTAAENVCYTLINVPMDSEPPSEISLKNDEKGDVKSKEALKKVIIMIL
NGEKLPGLLMTIIRFVLPLQDHTIKKLLLVFWEIVPKTTPDGRLLHEMILVCDA
YRKDLQHPNEFIRGSTLRFLCKLKEAELLEPLMPAIRACLEHRHSYVRRNAVL
AIYTIYRNFEHLIPDAPELIHDFLVNEKDASCKRNAFMMLIHADQDRALDYLS
5 TCIDQVQTFGDILQLVIVELIYKVCHANPSEARFIRCIYNLLQSSSPAVKYEAA
GTLVTLSSAPTAIAAAQCYIDLIIKESDNNVKLIVLDRLIELKEHPAHERVLQD
LVMDILRVLSTPDLEVRKKTLLQALDLVSSRNVEELVIVLKKEVIKTNNVSEHE
DTDKYRQLLVRTLHSCSVRFPDMAANVIPVLMEFLSDNNEAAAADVLEFVRE
AIQRFDNLRMLIVEKMLEVFAIKSVKIYRGALWILGEYCSTKEDIQSVMTAIR
10 RSLGEIPIVESEIKKEAGELKPEEEITVGPVQKLVTEMGTATQSAISSSRPTKK
EEDRPPLRGFLLDGDFVAASLATTTLKIALRYVALVQEKKKQNSFVAEAMLL
MATILHLGKSSLPKKPITDDDVDRISLCLKVLSECSPLMNDIFNKECRQSLSHM
LSAKLEEEKLSQKKESEKRNVTVPDDPISFMQLTAKNEMNCKEDQFQLSLL
AAMGNTQRKEAADPLASKLNKVTQLTGFSDPVYAEAYVHVNQYDIVLDVLV
15 VNQTSDDLQNCTLELATLGDLKLVEKPSPLTLAPHDFANIKANVKVASTENGII
FGNIVYDVSGAASDRNCVVLSDIHIDIMDYIQPATCTDAEFRQMWAEFEWEN
KVTVNTNMVDLNDYLQHILKSTNMKCLTPEKALSGYCGFMAANLYARSIFGE
DALANVSIEKPIHQGPDAAVTGHIRIRAKSQGMALSLGDKINLSQKKTSI
-COOH

20

Figure 19-Full-length Amino Acid Sequence (COPB) (SEQ ID NO: 43)

NH₂-MGDSEMAVFGAAAPYLKSEKERLEAQTRPFDLKKDVFVPDDKQEFVK
AKIVSREGGKVTAETEGKTVTVKEDQVMQQNPPKFDKIEDMAMLTFLHEPA
VLYNLKDRYGSWMIYTYSGLFVTVNPKWLPVYTPEVVAAYRGKKRSEAP
PHIFSISDNAYQYMLTDRENQSILITGESGAGKTVNTKRVIQYFAVIAAIGDRSK
5 KDQSPGKGTLEDQIIQANPALEAFGNAKTVRNDNSSRFGKFIRIHFGATGKLAS
ADIETYLLEKSRVIFQLKAERDYHIFYQILSNKKPELLDMLLITNNPYDYAFISQ
GETTVASIDDAEELMATDNAFDVLGFTSEEKNSMYKLTGAIMHFGNMKFKLK
QREEQAEPDGTEEADKSAYLMGLNSADLLKGLCHPRVKVGNEYVTKGQNVO
QVIYATGALAKAVYERMFNWMVTRINATLETQPRQYFIGVLDIAGFEIFDFN
10 SFEQLCINFTNEKLQQFFNHMHMFVLEQEEYKKEGIEWTFIDFGMDLQACIDLIE
KPMGIMSILEEECMFPKATDMTFKAKLFDNHLGKSANFQKPRNIKKGKPEAHFS
LIHYAGIVDYNIIIGWLQKNKDPLNETVVGLYQKSSLKLLSTLFANYAGADAPIE
KGKGKAKKGSSFQTVSALHRENLNKLMTNLRSTHPPHVRCIIPNETKSPGVM
DNPLVMHQLRCNGVLEGIRICRKGFPNRILYGDFRQRYRILNPAAIPEGQFIDSR
15 KGAEKLLSSLDIDHNQYKFGHTKVFFKAGLLGLLEEMRDERLSRIITRIQAQSR
GVLARMEYKKLLERRDSLLVIQWNIRAFMGVKNWPWMKLYFKIKPLLSAE
REKEMASMKEEFTRLKEALEKSEARRKEEEKMVSLLQEKNDLQLQVQAEQ
DNLADAEERCDQLIKNKIQLEAKVKEMNERLEDEEEMNAELTAKKRKLEDEC
SELKRDIDDLTLAKVEKEKHATENKVKNLTEEMAGLDEIIAKLTKEKKALQ
20 EAHQQALDDLQAEEDKVNTLTAKVKLEQQVDDLEGSLEQEKKVRMDLER
AKRKLEGDLKLTQESIMDLENDKQQLDERLKKKDFELNALNARIEDEQALGS
QLQKKLKLQARIEELEELESERTARAKVEKLRSCLSRELEEISERLEEAGGA
TSVQIEMNKKREAEFQKMRRDLEEATLQHEATAAALRKKHADSVAELGEQID
NLQRVKQKLEKEKSEFKLELDDVTSNMEQIIKAKANLEKMCRTLEDQMNEH
25 RSKAEETQRSVNDLTSQRAKLQTENGELSRQLDEKEALISQLTRGKLTYYTQQL
EDLKRQLEEEVKAKNALAHALQSARHDCDLLREQYEEETEAKAELQRVLSK
ANSEVAQWRTKYETDAIQRTEELEEAKKKLAQRLQEAEEAVEAVNAKCSSLE
KTKHRLQNEIEDLMVDVERSNAAAAAALDKKQRNFDKILAEWKQKYEESQSE
LESSQKEARSLSTELFKLKNAYEESLEHLETFKRENKNLQEEISDLTEQLGSSG
30 KTIHELEKVRKQLEAEKMELQSALEAEASLEHEEGKILRAQLEFNQIKAEIER
KLAEKDEEMEQAKRNHLRVVDSLQTSLSDAETRSRNEALRVKKKMEGDLNEM
EIQLSHANRMAAEAQKQVKSLSLQSLKDTQIQLDDAVRANDDLKENIAIVERR
NNLLQAELEELRAVVEQTERSRLAEQELIETSERVQLLHSQNTSLINQKKKM
DADLSQLQTEVEEAVQECRNAEEKAKKAITDAAMMAEELKKEQDTSALER
35 MKKNMEQTIKDLQHRLEAEQIALKGGKKQLQKLEARVRELENELEAEQKR
NAESVKGMRSERRIKELTYQTEEDRKNLLRLQDLVDKLQLKVAYKRQAE
AEEQANTNLSKFRKVQHELDEAEERADIAESQVNKLRAKSRDIGTKGLNEE
-COOH

40 Figure 20- Full-length Amino Acid Sequence (MYH7) (SEQ ID NO: 44)

NH₂-KVEELNSEIEKLSAFAKAREALQKAQTQEFQGSSEDYETALSGKEALSA
 ALRSQNLTSTENHRLRRSIKKITQELSDLQQERERLEKDLEEAHREKSKGDC
 TIRDLRNEVEKLRNEVNEREKAMENRYKSLSESNNKKLHNQEQVIKHLTESTN
 QKDVLLQKFNEKDLEVIQQNCYLMAAEDLELRSEGLITEKCSSQQPPGSKTIF
 5 SKEKKQSSDYEEELIQVLKKEQDIYTHLVKSLQESDSINNLAELNKIFALRKQL
 EQDVLSYQNLKRKTLEEQISEIRRREESFSLYSDQTFYLSICLEENNRFQVEHFS
 QEELKKKVSDLIQLVKELYTDNQHLKKTIFDLSCMGFQGNFGPDRLASTEQTE
 LLASKEDEDTIKIGEDDEINFLSDQHLQQSNEIMKDLKGGCKNGYLRHTESKI
 SDCDGAHAPGCLEEGAFINLLAPLFNEKATLLLESRPDLLKVVRELLGQLFLT
 10 EQEVSGEHLDGKTEKTPKQKGELVHFVQTNFSKPHDELKLSCEAQLVKAGE
 VPKVGLKDASVQTVATEGDLLRFKHEATREAWEEKPINTALSAEHRPENLHG
 VPGWQAALLSLPGITNREAKKSRLPILIKPSRSLGNMYRLPATQEVVTQLQSQI
 LELQGELKEFKTCNKQLHQKLILAEAVMEGRPTPDKTLLNAOPPVGAAYQDS
 PGEQKGIKTTSSVWRDKEMDSQQRSEIDSEICPPDDLASLPSCKENPEDVLS
 15 PTSVATYLSSKSQPSAKVSVMGTDQSESINTSNETEYLKQKIHDLETELEGYQN
 FIFQLQKHSQCSEAIITVLCGTEGAQDGLSKPKNGSDGEEMTFSSLHQVRYVK
 HVKILGPLAPEMIDSRVLENLKQQLLEEYKLQKEQNLNMQLFSEIHNLQNKF
 RDLSPPRYDSLVSQARELSLQRQQIKDGHGICVISRQHMNTMIKAFEELLQA
 SDVDYCVAEGFQEQLNQCAELLEKLEKLFLNGKSVGVEMNTQNELMERIEED
 20 NLTYQHLLPESPEPSASHALSDYETSEKSFFSRDQKQDNETEKTSMVNVSFSQ
 DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGSEFVQGSTSIFASGSELHSS
 LTSEIHFLRKQNQALNAMLIGSRDKQKENDKLRESLSRKTVSLEHLQREYAS
 VKEENERLQKEGSEKERHNQQLIQEVRCSGQELSRVQEELKLRQQLLSQNDK
 LLQSLRVELKAYEKLDEEHRRLREASGEGWKGQDPFRDLHSLMEIQALRLQ
 25 LERSIETSSTLQSRLEQLARGAEKAQEGALTLAVQAVSIPEVPLQPDKHDGDK
 YPMESDNSFDLFDSSQAVTPKSVSETPPLSGNDTDSLSCDSGSSATSTPCVSRL
 VTGHHLWASKNGRHVLGLIEDYEALLKQISQGQRLLAEMDIQTQEAPSSTSQE
 LGTKGPHAPLSKFVSSVSTAKLTLEEAYRRLKLLWRVSLPEDGQCPLHCEQIG
 EMKAEVTKLHKKLFEQEKKLQNTMKLLQLSKRQEKVIFDQLVVTHKILRKAR
 30 GNLELRPGGAHPGTCSPSRPGS
 -COOH

Figure 21- Partial Amino Acid Sequence (KIAA1633) (SEQ ID NO: 45)

NH₂-THAYNPKSPPTQNSSASSVNWNSANPDDMVVDYETDPAVVTGENISLSL
QGVEVFGHEKSSSDFISKQVLDMHKDSICQCPALVGTEKPKYLQHSCHSLEAV
EGQSVEPSLPFVWKPNDNLNCAGYCDALELNQTFDMTVDKVNCTFISHHAIG
KSQSFHTAGSLPPTGRRSGSTSSLSYSTWTSSHSDKTHARETTYDRESFENPQV
5 TPSEAQDMTYTAFSDVVMQSEVFVSDIGNQCACSSGKVTSEYTDGSQQRLVG
EKETQALTPVSDGMEVPNDSALQEFFCLSHDESNSEPHSQSSYRHKEMGQNL
RETVSYCLIDDECPLMVPAFDKSEAQVLNPEHKVTETEDTQMVSKGKDLGTQ
NHTSELILSSPPGQKVGSSFGLTWDANDMVISTDKTMCMSTPVLEPTKVTFSV
SPIEATEKCKKVEKGNRGLKNIPDSKEAPVNLCKPSLGKSTIKTNTPIGCKVRK
10 TEIISYPRPNFKNVKAKVMSRAVLQPKDAALSKVTPRPQOTSASSPSSVNSRQ
QTVLSRTPRSDLNADKKAELINKTHKQQFNKLITSQAVHVTTHSKNASHRVP
RTTSAVKSNQEDVDKASSSNSACETGSVSALFQKIKGILPVKMESAECLEMTY
VPNIDRISPEKKGEKENGTSMEKQELKQEIMNETFEYGSFLGSASKTTTTSGR
NISKPDSCGLRQIAAPKAKVGPPVSLRRNSDNRNPSADRAVSPQRIRRVSSSS
15 GNAAVIKYEEKPPKPAFQNGSSGSFYLKPLVSRRAHVHLMKTPPKGPSRKNLFT
ALNAVEKSRQKNPRSLCIQPQTAPDALPPEKTLELTQYKTKCENQSGFILQLKQ
LLACGNTKFEALTVVIQHLLSEREEALKQHKTLSQELVNLRGELVTASTTCEK
LEKARNELQTVYEAQVQHQAEKTERENRLKEFYTREYEKLRDYEIEAEKY
KMQLQEQFDNLNAAHETSKLEIEASHSEKLELLKKAYEASLSEIKKGHEIEKK
20 SLEDLLSEKQESLEKQINDLKSENDALNEKLEKSEEQKRRAREKANLKNPQIMY
LEQELESLEKAVLEIKNEKLHQQDIKLMKMEKLVNNTALVDKLRFFQENEE
LKARMDKHMAISRQLSTEQAVLQESLEKESKVNKRLSMENEELLWKLHNGD
LCSPKRSPTSSAIPLQSPRNSGSFPSPSISPR
-COOH
25

Figure 22- Partial Amino Acid Sequence (KIAA1288(1191)) (SEQ ID NO: 46)

NH₂-MPVFHTRTIESILEPEAQQISHLVIMHEEGEVDGKAIPDLTAPVAAVQAAV
SNLVRVGKETVQTTEDQILKRDMPPAFIKVENACTKLVQAAQMLQSDPYSVP
ARDYLIDGSRGILSGTSDLLTFDEAEVRKIIRVCKGILEYLTVAEIVVETMEDLV
TYTKNLGPGMTKMAKMIDERQQELTHQEHRVMLVNSMNTVKELLPVLISAM
5 KIFVTSKNSKNQGIEEALKNRNFTVEKMSAEINEIIRVLQLTSWDEDAWASKDT
EAMKRALASIDSKLNQAKGWLRDPNASPGDAGEQAIRQILDEAGKVGELCA
GKERREILGTCKMLGQMTDQVADLRARGQGASPVAMQKAQQVSQGLDVVT
AKVENAARKLEAMTNSKQSIAKKIDAAQNWLADPNGGPEGEEQIRGALAEA
RKIAELCDDPKERDDILRSLGEIAALTSKLGDLRRQGKGDSPEARALAKQVAT
10 ALQNLQTKTNRAVANSRPAKAAVHLEGKIEQARRWIDNPTVDDRGVGQAAIR
GLVAEGHRLANVMMGPYRQDLLAKCDRVDQLTAQLADLAARGESESPQAR
ALASQLQDSLKDLKAQMQEAMTQEVSDVFSDTTTPIKLLAVAATAPPDAPNR
EEVFDERAANFENHSGRLGATAEKAAAVGTANKSTVEGIQASVKTARELTPQV
ISAARILLRNPGNQAAAYEHFETMKNQWIDNVEKMTGLVDEAIDTKSLLDASEE
15 AIKKDLKCKVAMANIQQPQMLVAGATSIARRANRILLVAKREVENSEDPKFRE
AVKAASDELSTISPMVMMDAKAVAGNISDPDLQKSFLDSGYRILGAVAKVREA
FQPQEPDFPPPPDLEQLRLTDELAPPKPLPEGEVPPPRPPPPPEEKDEEFPEQK
AGEVINQPMMAARQLHDEARKWSSKGNIIAAAKRMALLMAEMSRLVRG
GSGTKRALIQCAKDIAKASDEVTRLAKEVAKQCTDKRIRTNLLQVCERIPST
20 QLKILSTVKATMLGRTNISDEESEQATEMLVHNAQNLMQSVKETVREAEAASI
KIRTDAGFTLRWVRKTPWYQ
-COOH

Figure 23- Full-length Amino Acid Sequence (mVCL) (SEQ ID NO: 47)

5'-GGGCACGACTCCAGCCTCTTCGAGGACAGAAGCGACCATGACAAACAC
AAGGACAGAAAAACGGAAAAAGAGGAAGAAAGGCGAGAAGCAGGCTCCC
GGGGAAGAGAAGGGGAGAAAACGGAGAAGAGTCAAGGAGGATAAAAAG
AAGCGGGATCGAGACCGTGCAGAGAATGAGGTGGACAGAGATCTCCAGTG
5 TCATGTCCCTATAAGATTAGACTTACCTCCTGAGAAGCCTCTTACAAGCTCG
TTAGCCAAACAAGAAGAAGTAGAACAGACACCCCTTCAGGAAGCTTTGAA
TCAGCTCATGAGACAATTGCAAAGTACCATGAAAGAAAAGATCAAGAATA
ACGACTACCAGTCCATAGAAGAACTAAAGGATAACTTCAAGCTAATGTGTA
CTAATGCAATGATTTACAATAAGCCAGAGACCATTTATTATAAAGCTGCAAA
10 GAAGCTGTTGCACTCAGGGATGAAAATTCTCAGTCAGGAGAGAATTCAGA
GCCTGAAGCAGAGTATAGACTTCATGTCAGACTTGCAGAAAACCTCGGAAG
CAGAAAGAACGAACAGATGCCTGTCAGAGTGGGGAGGACAGCGGCTGCT
GGCAGCGCGAGAGGGAAGACTCTGGAGATGCTGAAACACAGGCCTTCAG
AAGCCCCGCTAAGGACAATAAAAGGAAAGACAGAGATGTGCTTGAAGACA
15 AATGGAGAAGCAGCAACTCAGAAAGGGAGCATGAGCAGATTGAGCGCGTT
GTCCAGGAGTCAGGAGGCAAGCTAACACGGCGGCTGGCAAACAGTCAGT
GTGAATTTGAA-3'

Figure 24- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
20 SEQ ID NO: 6 (SEQ ID NO: 48) (807 nucleotides in total)

5'-GCCATCGTGGAGCGCAGAGCCAACCTGCTGCGGGCTGAGATTGAGGAG
CTGCGGGGCCACGCTGGAGCAGACGGAGAGGAGCAGGAAGATTGCAGAGC
AGGAGCTGCTGGACGCCAGTGAGCGCGTGCAGCTCCTCCACACCCAGAAC
ACGAGCCTCATCAACACCAAGAAGAAGCTGGAAAATGATGTTTCACAGCT
5 GCAGAGTGAAGTGGAAGAAGTGATTCAAGAGTCACGCAATGCAGAAGAG
AAGGCTAAGAAAGCCATTACTGATGCCGCCATGATGGCGGAGGAGCTGAA
GAAGGAGCAGGACACCAGCGCCACCTGGAGCGGATGAAGAAGAACATG
GAG-3'

- 10 Figure 25- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 10 (SEQ ID NO: 49) (348 nucleotides in total)

5'-GAAAAACAAGAGCTGAAACAAGAGATTATGAATGAGACTTTTGAATATG
 GTTCTCTGTTTTTGGGCTCTGCTTCAAAAACAACGACCACCTCAGGTAGGA
 ATATATCCAAGCCTGACTCCTGCGGTTTGAGGCAAATAGCTGCTCCAAAAG
 CCAAAGTGGGGCCCCCTGTTTCCTGTTTGAGGCGGAACAGTGACAATAGA
 5 AATCCCAGTGCTGATCGAGCCGTATCTCCTCAGAGGATCAGGCGTGTGTCC
 AGTTCTGCTGGTAATGCCGCTGTCATCAAGTATGAGGAGAAACCTCCAAA
 CCAGCATTTTCAAGATGGTTCCTCAGGATCCTTTTATTTGAAGCCTTTGGTAT
 CCAGGGCTCATGTTCACTTGATGAAAACCTCCTCCAAAAGGTCCTTCGAGAA
 AAAATTTATTTACAGCTCTTAATGCAGTTGAAAAGAGCAAGCAAAAAGAATC
 10 CTCGAAGCTTATGTATCCAGCCACAGACAGCTCCCGATGCGCTGCCCCCTG
 AAAAAACACTTGAATTGACGCCATATAAAACAAAATGTGAAAACCAAAGT
 GGATTTATCCTGCAGCTCAAGCAGCTTCTTGCCTGTGGTAATACCAAGTTTG
 AGGCATTGACAGTTGTGATTCAGCACCTGCTGTCTGAGCGGGAGGAAGCA
 CTGAAACAACACAAAACCCTATCTCAAGAACTTGTTAACCTCCGGGGAGA
 15 GCTAGTCACTGCTTCAACCACCCGTGAGAAATTAGAAAAAGCCAGGAATG
 AGTTACAAACAGTGTATGAAGCATTTCGTCCAGCAGCACCAGGCTGAAAAA
 ACAGAACGAGAGAATCGGCTTAAAGAGTTTTACACCAGGGAGTATGAAAA
 GCTTCGGGACACTTACATTGAAGAAGCAGAGAAGTACAAAATGCAATTGC
 AAGAGCAGTTTGGCAACTTAAATGCTGCGCATGAAACCTTTAAGTTGGAAA
 20 TTGAAGCTAGCCACTCAGAGAACTTGAATTGCTAAAGAAGGCCTATGAA
 GCCTCCCTTTCAGAAATTAAGAAAGGCCATGAAATAGAAAAGAAATCGCTT
 GAAGATTTACTTTCTGAGAAGCAGGAATCGCTAGAGAAGCAAATCAATGAT
 CTGAAGAGTGAAAATGATGCTTTAAATGAAAAATTGAAATCAGAAGAACA
 AAAAAGAAGAGCAAGAGAAAAAGCAAATTTGAAAAATCCTCAGATCATGT
 25 ATCTAGAACAGGAGTTAGAAAGCCTGAAAGCTGTGTTAGAGATCAAGAAT
 GAGAAACTGCATCAACAG-3'

Figure 26- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
 SEQ ID NO: 25 (SEQ ID NO: 50) (1281 nucleotides in total)

NH₂-TRPIIARAQCPGLGTMKR TDSGSICHHAPPPCWAHHAPRQSPRQPSSRER
RPPERAGSWAVAAEEEEAAAPWMRHYFGEDDGEMVPTSSAAAF LSDK
DRGPPVQSQTWRS AERV PFGQAHS LRAFEK PPLVQTQALRDFE KHLNDLKKE
NFS LKLRIYFLEERMQQKYEV SREDVYKR NIELKVEVES LKRELQDRKQHLD
5 KTWADAEDLNSQNEAELRRQVEERQQETEHVYELLGNKIQLLQEEPRLAKNE
ATEMETLVEAEKRCNLELSE RWTNAAKNREDAAGDQEKPDQYSEALAQ RDR
RIEELRQSLAAQEG LVEQLSQEK RQLLHLL EEPASMEVQPV PKGLPTQQKPDL
HETPTTQPPVSESHLAELQDKIQQTEATNKILQEKLNDLSCE LKSAQESSQKQD
TTIQSLKEM LKSRESETEELYQVIEGQNDTMAKLREMLHQSQLGQLHSSEGIA
10 PAQQQVALLDLQSALFCSQLEIQRLQRLVRQKERQLADGKRCVQLVEAAAQE
REHQKEAAWKHNQELRKALQHLQGE LHSKSQQLHVLEAEKYNEIRTQGQNI
QHLSHSLSHKEQLIQELQELLQYRDNADKTLDTNEVFLEKLRQRIQDRAVALE
RVIDEKFSALEEKDKELRQLRLAVRDRDHDLERLRCVLSANEATMQSMESLL
RARGLEVEQLTATCQNLQWLKEELET KFGHWQKEQESIQQQLQTS LHDRNKE
15 VEDLSATLLCKLGPGQSEVAEELCQRLQRKERMLQDLLSDRNKQAVEHEMEI
QGILLQSMGTREQERQAAAEK MVQAFMERNSELQALRQYLGGKELMTSSQTF
ISNQPAGVTSIGPHHGEQTDQGS MQMPSRDDSTSLTAREEASIPRSTLGDSDTV
AGLEKELSNAKEELELMAKKKKK
-COOH
20

Figure 27- Partial Amino Acid Sequence (mBC028274(908)) (SEQ ID NO: 87)

NH₂-MRADFNPSGFSLELAVCVLSVGLLAVVFLWRGFRSIRSRFYVGREKKLA
LELSALIEEKCKLLDKVSIVQKEYEGLESSLKEASFEKESTEAQSLEFVEGSQIS
EATYENLEQSKSKLEDEILLLEEKLEERAKHSEQDELMADISKRIQSLEDESK
SLKSQVAEAKTTFRIFEINEERLKGAIKDALNENSQSQKQLQETEMMKE
5 QVNDLDKQKVALEESRAQAEQALSEKESQIETLVTSLLKMKDWAAVLGEADD
GNLDLDMKSGLENTAALDNQPKGALKKLIYAAKLNASLKALEGERNQVYTQ
LSEVDQVKEDLTEHIKSLESKQASLQSEKTEFESESQKLQKQKLKVITELYQENE
MKLHRKLTVEENYRLEKEEKLSKVDEKISHATEELETCTQRAKDLEELERTI
HSYQQGVISHEKKAHDNWLAARTLERNLNDLRKENAHNRQKLTETEFKFELL
10 EKDPYALDVPNTAFGREHSPYGPSPLGRPPSETRAFLSPPTLLEGPLRLSPLLPG
GGGRGSRGPENLLDHQMNTERGESSYDRLSDAPRAPSDRSLSPWEQDRRMT
AHPPPGQPYSDPALQRQDRFYPNSGRLSGPAELRSYNMPSLDKVDGPVPSEME
SSGNGTKDNLGNSNVPDSPIPAEECAAGRGFPPPPFPPVRDPLFPVDPRSQFMR
RGPSFPPPPPGSIYAAPRDYFPPRDFPGPPLPPFPGRTVYAPRGFPPYLPPRAGFF
15 PPPHPESRSELPPDLIPPSKEPAADPPETQEA
-COOH

Figure 28- Full-length Amino Acid Sequence (mBC026864(777)) (SEQ ID NO: 88)

NH₂-MDGKQACERMIRALELDPNLYRIGQSKIFFRAGVLAHLEEERDLKITDIII
 FFQAVCRGYLARKAFAKKQQQLSALKVLQRNCAAYLKLRLHWQWWRVFTKV
 KPLLQVTRQEEELQAKDEELLKVKEKQTKVEGELEEMERKHQQLLEEKNILA
 5 EQLQAETELFAEAEEMRARLAACKQELEEILHDLESRVEEEEERNQILQNEKK
 KMQAHIQDLEEQLDEEEGARQKLQLEKVTAEAKIKKMEEEVLLLEDQNSKFI
 KEKKLMEDRIAECSSQLAESEEKAKNLAKIRNKQEVMSDLEERLKKEEKTR
 QELEKAKRKLDGETTDLQDQIAELQAQVDELKVQLTKKEEELQGALARGDD
 ETLHKNNALKVARELQAQIAELQEDFESEKASRNKAQKQKRDLSEEEALKT
 ELEDTLDTTAAQQELRTKREQEVAELKKALEDETKNHEAQIQDMRQRHATAL
 10 EELSEQLEQAKRFKANLEKNKQGLETDNKEACEVKVLQQVKAESEHKRKK
 LDAQVQELHAKVSEGDRLRVELAEKANKLQNELDNVSTLLEEAEEKGIKFAK
 DAAGLESQLODTQELLQEETRQKLNLSRIRQLEEEKNSLQEQEEEEEEARKN
 LEKQVLALQSQLADTKKKVDDDLGTIESLEEAKKKLLKDVEALSQRLEEKVL
 AYDKLEKTKNRLQQELDDLTVDLDHQRQIVSNLEKKQKKFDQLLAEEKGISA
 15 RYAEERDRAEAEAREKETKALSLARALEEAEAKEEFERQNKQLRADMEDL
 MSSKDDVGKNVHELEKSKRALEQQVEEMRTQLEEELEDELQATEDAKLRLEV
 NMQAMKAQFERDLQTRDEQNEEKKRLLKQVRELEAELEDERKQRALAVAS
 KKKMEIDLKDLEAQIEAANKARDEVIKQLRKLQAQMKDYQRELEEARASRD
 EIFAQSESEKKLSLEAEILQLQEELASSERARRHAEQERDELADEIANSASG
 20 KSALLDEKRRLEARIAQLEEELEEEQSNMELLNDRFRKTTLQVDTLNTLAAE
 RSAAQKSDNARQQLERQNKELKAKLQELEGAVKSKFKATISALEAKIGQLEE
 QLEQEAKERAAANKLVRRTKKLKEIFMQVEDERRHADQYKEQMEKANAR
 MKQLKRQLEEAEEEATRANASRRKLQRELDDATEANEGLSREVSTLKNRLRR
 GGPISFSSSRSGRRQLHIEGASLELSDDDTESKTSVDVNDTQPPQSE
 25 -COOH

Figure 29- Full-length Amino Acid Sequence (m5730504C04Rik) (SEQ ID NO: 89)

NH₂-MAQQAADKYLYVDKNFINNPLAQADWAAKKLVWVPSSKNGFEPASLKE
 EVGEEAIVELVENGKKVKVNKDDIQKMNPCKFSKVEDMAELTCLNEASVLHN
 LKERYYSGLIYTYSGLFCVVINPYKNLPIYSEEIVEMYKGKKRHEMPPHIYAIT
 DTAYRSMMQDREDQSILCTGESGAGKTENTKKVIQYLAHVASSHKSCKDQGE
 5 LERQLLQANPILEAFGNAKTVKNDNSSRFGKFIRINFDVNGYIVGANIETYLLE
 KSRAIRQAKEERTFHIFYLLSGAGEHLKTDLLLEPYNKYRFLSNGHVTIPGQ
 QDKDMFQETMEAMRIMGIPEDQMGLLRVISGVLQLGNIAFKKERNTDQAS
 MPDNTAAQKVSHLLGINVTDFTRGILTPIKVGGRDYVQKAQTKEQADFAIEAL
 AKATYERMFRWLVLRLINKALDKTKRQGASFIGILDIAGFEIFDLNSFEQLCINY
 10 TNEKLQQLFNHTMFILEQEEYQREGIEWNFIDFGLDLQPCIDLIEKPAGPPGILA
 LLDEECWFPKATDKSFVEKVVEQGTHTPKFQKPKQLKDKADFCIIHYAGKVD
 YKADEWLMKNMDPLNDNIATLLHQSSDKFVSELWKDVDRIIGLDQVAGMSE
 TALPGAFKTRKGMFRTVGQLYKEQLAKLMATLRNTNPNFVRCIIPNHEKKAG
 KLDPHLVLDQLRCNGVLEGIRICRQGFPNRVVFQEFRQRYEILTNPNSIPKGFMD
 15 GKQACVLMIKALELDSNLYRIGQSKVFFRAGVLAHLEEERDLKITDVIIGFQA
 CCRGYLARKAFAKRQQQLTAMKVLQRNCAAYLRLRNWQWWRLFTKVKPLL
 NSIRHEDELLAKEAELTKVREKHLAAENRLTEMETMQSQLMAEKLQLQEQLQ
 AETELCAEAEELRARLTAKKQEELEICHDLARVEEEEEERCQYLQAEKKKMQ
 QNIQELEEQLEEEEESARQKLQLEKVTTEAKLKKLEEDQIIMEDQNCKLAKEKK
 20 LLEDRAVEFTTNLMEEEEKSKSLAKLKNKHEAMITDLEERLRREEKQRQELEK
 TRRKLEGDSTDLSQIAELQAQIAELKMQLAKKEEELQAALARVEEEAAQKN
 MALKKIRELETQISELQEDLESERASRNKAQKQKRDLEGELEALKTELEDTL
 STAAQQLRSKREQEVSILKKTLEDEAKTHEAQIQEMRQKHSQAVEELADQL
 EQTKRVKATLEKAKQTLNERGELANEVKALLQGKGDSSEHKRKKVEAQLQE
 25 LQVKFSEGERVTELADKVTKLQVELDSVTGLLSQSDSKSSKLTDFSALESQ
 LQDTQELLQEEENRQKLSLSTKLKQMEDEKNSFREQLEEEEAAKRNLEKQIATL
 HAQVTDMMKKKMEDGVGCLETAEEAKRRLQKDLEGLSQRLEEKVAAYDKLE
 KTKTRLQQELDDLLVDLDHQRQSVSNLEKKQKKFDQLLAEEKTISAKYAEER
 DRAEAEAREKETKALSLARALEEAMEQKAELERLNKQFRTEMEDLMSSKDD
 30 VGKSVHELEKSKRALEQQVEEMKTQLEEELEDELQATEDAKLRLEVNLQAMK
 AQFERDLQGRDEQSEEKKQLVRQVREMAELEDERKQRSMAMAARKKLE
 MDLKDLEAHIDTANKNREEAIKQLRKLQAQMKDCMRELDDTRASREEILAQ
 AKENEKKLKSMEAEMIQLQEELAAAERAKRQAQQRDELADEIANSSGKGA
 LALEEKRRLEARIALLEEELEEEQGNTELINDRLKKANLQIDQINTDLNLSH
 35 AQKNENARQQLERQNKELKAKLQEMESAVKSKYKASIAALEAKIAQLEEQL
 DNETKERQAASKQVRRTEKKLKDVLQVEDERRNAEQFKDQADKASTRLKQ
 LKRQLEEAEEEEAQRANASRRKLQRELEDATETADAMNREVSSLKNKLRRGDL
 PFVVTRRIVRKGTGDCSDEEVDGKADGADAKAAE
 -COOH
 40

Figure 30- Full-length Amino Acid Sequence (mMYH9) (SEQ ID NO: 42)

NH₂-MSAAKENPCRKFQANIFNKSKCQNCFKPRESHLLNDEDLTQAKPIYGGW
LLLAPDGTDFDNPVHRSRKWQRRFFILYEHGLLRYALDEMPPTLPQGTINMN
QCTDVVDGEARTGQKFSLCILTPDKEHFIRAETKEIISGWLEMLMVYPRTNKQ
NQKKKRKVEPPTPQEPGPAKMAVTSSSGGTSGSSSSIPSAEKVPTTKSTLWQEE
5 MRAKDQPDGTSLSPAQSPSQSQPPAACTPREPGLESKEDESTISGDRVGGGRK
VRVESGYFSLEKAKQDLRAEEQLPPLSPSPSTPHSRRSQVIEKFEALDIEKAE
HMETNMLILTTPSSDTRQGRSERRAIPRKRDFASEAPTAPLSDACPLSPHRRAK
SLDRRSTESSMTPDLLNFKKGWLTQYEDGQWKKHWFVLADQSLRYYRDSV
AEEAADLDGEINLSTCYDVTEYPVQRNYGFQIHTKEGEFTLSAMTSGIRRNWI
10 QTIMKHVLPASAPDVTSSLPEGKNKSTSFETCSRSTEKQEAEPGEPDPEQKKS
ARERRREGRSKTFDWAEFRPIQQALAQERASAVGSSDSGDPGCLEAEPGELER
ERARRREEPRKRFGMLDTIDGPGMEDTALRMDIDRSPGLLGTPDLKTQNVHV
EIEQRWHQVETTPREEKQVPIAPLHLSLEDRSERLSTHELTSLLEKELEQSQK
EASDLLEQNRLQLDQLRVALGREQSAREGYVLQATCERGFAAMEETHQKKIE
15 DLQRQHQRLEKLREEKDRLLAEETAATISAIEAMKNAHREEMERELEKSQRS
QISSINSIDIALRRQYLEELQSVQRELEVLEQYSQKCLENAHLAQALEAERQ
ALRQCQRENQELNAHNQELNNRLAAEITRLRTLTTGDGGGESTGLPLTQGKD
AYELEVLLRVKESEIQYLKQEISSLKDELQTALRDKKYASDKYKDIYTELSIAK
AKADCDISRLKEQLKAATEALGEKSPEGTTVSGYDIMKSKSNPDFLKKDRSCV
20 TRQLRNIRSKSVIEQVSWDN
-COOH

Figure 31- Full-length Amino Acid Sequence (mp116Rip) (SEQ ID NO: 91)

NH₂-MMEAIIKKKMQLKLDKENALDRAEQAEAEQKQAEERSKQLEDELAA
MQKKLKGTEDELDRATERLATALQKLEEAEEKAADSESRGMKVIENTALKDE
EKMELQEIQLEAKHIAEEADRKYEEVARKLVIIIEGDLERTEERAELAESKCSE
5 LEEELKNVTNNLKSLEAQAEKYSQKEDKYEEEIKILTDKLKEAETRAEFAERS
VAKLEKTIDDLEDELYAQKLKYKAISEELDHALNDMTSI
-COOH

Figure 32- Full-length Amino Acid Sequence (TPM3) (SEQ ID NO: 92)

NH₂-MTDAQMADFGAAAQYLRKSEKERLEAQTRPFDIRTECFVPDDKEEFVK
AKILSREGGKVIAETENGKTVTVKEDQVLQQNPPKFDKIEDMAMLTFLHEPAV
LFNLKERYAAWMIYTYSGLFCVTVNPKWLPVYNAEVVAAYRGKKRSEAPP
HIFSISDNAYQYMLTDRENQSILITGESGAGKTVNTKRVIQYFASIAAIGDRGKK
5 DNANANKGTLEDQIIQANPALEAFGNAKTVRNDNSSRFGKFIRIHFGATGKLA
SADIETYLLEKSRVIFQLKAERNYHIFYQILSNKKPELLDMLLVTTNNPYDYAFV
SQGEVSVASIDDSEELMATDSAFDVLGFTSEEKAGVYKLTGAIMHYGNMKFK
QKQREEQAEPDGTEDADKSAYLMGLNSADLLKGLCHPRVKVGNEYVTKGQS
VQQVYYSIGALAKAVYEKMFNWMVTRINATLETQPRQYFIGVLDIAGFEIFD
10 FNSFEQLCINFTNEKLQQFFNHMFVLEQEEYKKEGIEWTFIDFGMDLQACID
LIEKPMGIMSILEEECMFPKATDMTFKAKLYDNHLGKSNNFQKPRNIKGGKQEA
HFSLIHAGTVDYNILGWLEKNKDPLNETVVALYQKSSLKLMATLFSSYATAD
TGDSGKSKGGKKKGSSFTVSALHRENLNKLMTNLRTTHPHFVRCIIPNERKA
PGVMDNPLVMHQLRCNGVLEGIRICRKGFPNRILYGDFRQRYRILNPVAIPEGQ
15 FIDSRKGTEKLLSSLDIDHNQYKFGHTKVFFKAGLLGLLEEMRDERLSRIITRM
QAQARGQLMREFKKIVERRDALLVIQWNIRAFMGVKNWPWMKLYFKIKPLL
KSAETEKEMATMKEEFGRIKETLEKSEARRKEEEKMVSLLEKNDLQLQVQ
AEQDNLNDAEERCDQLIKNKIQLEAKVKEMNERLEDEEEMNAELTAKKRKLE
DECSELKKDIDDLELTAKVEKEKHATENKVKNLTEEMAGLDEIIAKLTKEKK
20 ALQEAHQQALDDLQVEEDKVNSLSKSKVKLEQQVDDLEGSLEQEKVVRMDL
ERAKRKLEGLDLKTQESIMDLENDKLQLEEKLKKKEFDINQQNSKIEDEQVLA
LQLQKKLKENQARIEEEEELEAERTARAKVEKLRSCLSRELEEISERLEEAGG
ATSVQIEMNKKREAEFQKMRRDLEEATLQHEATAAALRKKHADSVAELEGEI
DNLQRVKQKLEKEKSEFKLELDDVTSNMEQIIKAKANLEKVSRTLEDQANEY
25 RVKLEEAQRSLNDFTTQRAKLQTENGELARQLEEKEALISQLTRGKLSYTQQ
MEDLKRQLEEEGKAKNALAHALQSARHDCDLLREQYEEETEAKAELQRVLS
KANSEVAQWRTKYETDAIQRTEELEEAKKKLAQRLQDAEEAVEAVNAKCSSL
EKTKHRLQNEIEDLMVDVERSNAAAAAALDKKQRNFDKILAEWKQKYEESQS
ELESSQKEARSLSTELFKLKNAYEESLEHLETFKRENKNLQEEISDLTEQLGEG
30 GKNVHELEKVRKQLEVEKLELQSALEEAASLEHEEGKILRAQLEFNQIKAEI
ERKLAEKDEEMEQAKRNHQRVVDSLQTSLEDAETRSRNEVLRVKKKMEGDLN
EMEIQLSHANRMAAEAQKQVKSLSLLKDTQIQLDDAVRANDDLKENIAIVE
RRNNLLQAELEELRAVVEQTERSRLAEQELIETSERVQLLHSQNTSLINQKK
KMESDLTQLQSEVEEAVQECRNAEEKAKKAITDAAMMAEELKKEQDTSABL
35 ERMKKNMEQTIKDLQHLDEAEQIALKGGKKQLQKLEARVRELEGELEAEQ
KRNAESVKGMRKSERRIKELTYQTEEDKKNLLRLQDLVDKLQLKVAYKRQ
AEEAEEQANTNLSKFRKVQHELDEAEERADIAESQVNKLRAKSRDIGAKQKM
HDEE
-COOH

40

Figure 33- Full-length Amino Acid Sequence (MYH6) (SEQ ID NO: 93)

NH₂-MDEAETDATENKRASEAKRASAMPPPPPPPPISPPALIPAPAAGEEGPASL
GQAGAAGCSRSRPPALEPERSLGRLRGRFEDYDEELEEEEEEMEEEEEEEEEMS
HFSLRLESGRADSEDEEERLINLVELTPYILCSICKGYLIDATTITECLHTFCKSCI
VRHFYYSNRCPKCNIVVHQTQPLYNIRLDRQLQDIVYKLVINLEEREKKQMH
5 DFYKERGLEVPKPAAPQVPSSKGKTKKVLESVFRIPPELDMSLLLEFIGANED
TGHFKPLEKKFVRVSGEATIGHVEKFLRRKMGLDPACQVDIICGDHLLERYQT
LREIRRAIGDTAMQDGLLVLYGLVVSPLKIT
-COOH

10 Figure 34- Full-length Amino Acid Sequence (mMBLR) (SEQ ID NO: 94)

NH₂-MHRTTRIKITELNPHLMCALCGGYFIDATTIVECLHSFCKTCIVRYLETNK
YCPMCDVQVHKTRPLLSIRSDKTLQDIVYKLVPGLFKDEMKRRRDFYAAAYPLT
EVPNGSNEDRGEVLEQEKGALGDDEIVSLSIEFYEGVRDREEKKNLTENGDG
DKEKTGVRFLRCPAAMTMHLAKFLRNKMDVPSKYKVEILYEDEPLKEYYT
5 LMDIAYIYPWRRNGPLPLKYRVQPACKRLTLPTVPTPSEGTNTSGASECESVSD
KAPSPATLPATSSSLPSPATPSHGSPSSHGPPATHPTSPTPPSTAAGTTTATNGGTS
NCLQTPSSTSRRGRKMTVNGAPCPP
-COOH

10 Figure 35- Full-length Amino Acid Sequence (mZFP144) (SEQ ID NO: 95)

NH₂-MHRTRIKITELNPHLMCALCGGYFIDATTIVECLHSFCKTCIVRYLETNK
YCPMCDVQVHKTRPLLSIRSDKTLQDIVYKLVPGLFKDEMKRRRDFYAAAYPLT
EVPNGSNEDRGEVLEQEKGALSDDDEIVSLSIEFYEGAGDRDEKKGPLENGDG
DKEKTGVRFLRCPAAMTVMHLAKFLRNKMDVPSKYKVEVLYEDEPLKEYYT
5 LMDIAYIYPWRRNGPLPLKYRVQPACKRLTLATVPTPSEGTNTSGASESSGATT
AANGGSLNCLQTPSSTSRRGRKMTVNGAPVPPLT
-COOH

10 Figure 36- Full-length Amino Acid Sequence (ZNF144(294)) (SEQ ID NO: 65)

NH₂-MDDREDLVYQAKLAEQAERYDEMVESMKKVAGMDVELTVEERNLLSV
AYKNVIGARRASWRIISSIEQKEENKGGEDKCLKMIREYRQMVETELKLICCDIL
DVLDKHLIPAANTGESKVFYYKMGDYHRYLAEFATGNDRKEAAENSLVAY
KAASDIAMTELPPTHPIRLGLALNFSVFYYEILNSPDRACRLAKAAFDDAIAEL
5 DTLSEESYKDSTLIMQLLRDNLTWTSDMQGDGEEQNKEALQDVEDENQ
-COOH

Figure 37- Full-length Amino Acid Sequence (14-3-3epsilon) (SEQ ID NO: 96)

NH₂-REASHPLCTGPAQAGLAHRCLLAALMGKRLGTGDCLWPTQLLGQWPVT
LVCLRPLCPLMFLVLELELLPGTLQLHPPCLIPPGRPGH
-COOH

- 5 Figure 38- Partial Amino Acid Sequence (BF672897(87)) (SEQ ID NO: 69)

NH₂-MATQADLMELDMAMEPDRKAAVSHWQQQSYLDSGIHSGATTTAPSLSG
KGNPEEEDVDTSQVLYEWEQGFSSQFTQEQVADIDGQYAMTRAQRVRAAMF
PETLDEGMQIPSTQFDAAHPTNVQRLAEPSQMLKHAVVNLINYQDDAELATR
AIPELTKLLNDEDQVVVNKAAMVHQLSKKEASRHAIMRSPQMVSIVRTMQ
5 NTNDVETARCTAGTLHNLSHHREGLLAIFKSGGIPALVKMLGSPVDSVLFYAIT
TLHNLLHQEGAKMAVRLAGGLQKMVALLNKTNVKFLAITTDCLQILAYGN
QESKLII LASGGPQALVNIMRTYTYEKLWTTSRVLKVLSSVCSSNKPAIVEAGG
MQALGLHLTDPSQRLVQNCLWTLRNLSDAATKQEGMEGLLGLTLVQLLGSDDI
NVVTCAAGILSNLTCNNYKNKMMVCQVGGIEALVRTVLRAGDREDITEPAIC
10 ALRHLSRHQEAEMAQNAVRLHYGLPVVVKLLHPPSHWPLIKATVGLIRNLA
LCPANHAPLREQGAIPRLVQLLVRAHQDTQRRTSMGGTQQQFVEGVRMEEIV
EGCTGALHILARDVHNRI VIRGLNTIPLFVQLLYSPIENIQRVAAGVLCELAQD
KEAAEAIEAEGATAPL TELLHSRNEGVATYAAAVLFRMSSEDKPQDYKKRLSVE
LTSSLFRTEPMAWNETADLGLDIGAQGEALGYRQDDPSYRSFHSGGYGQDAL
15 GMDPMMEHMGGHHPGADYPVDGLPDLGHAQDLMDGLPPGDSNQLAWFD
TDL
-COOH

Figure 39- Full-length Amino Acid Sequence (mCATNB) (SEQ ID NO: 97)

NH₂-MDDSEVESTASILASVKEQEAQFEKLTRALEEERRHVSAQLERVRVSPQD
ANSLMANGTLTRRHQNGRFVGDADLERQKFSDLKLNGPQDHNHLLYSTIPR
MQEPGQIVETYTEEDPEGAMSVVSVETDDGTTRRTETTVKKVVKTMTRTV
QPVPMGPDGLPVDASAVSNNYIQT LGRDFRKNNGGPGPYVGQAGTATLPRN
5 FHYPDGYGRHYEDGYPGGSDNYGSLSRVTRIEERYRPSMEGYRAPSRQDVY
GPQPQVRVGGSSVDLHRFHPEPYGLEDDQRSMGYDDL DYGMMSDYGTARRT
GTPSDPRRRLRSYEDMIGEEVPPDQYYWAPLAQHERGSLASLDSL RKGMPPPS
NWRQPELPEVIAMLGFR LDAVKSNAAAYLQHLCYRNDKVKTDVAKLKGIPIL
VGLLDHPKKEVHLGACGALKNISFGRDQDNKIAIKNCDGVPALVRLLRKARD
10 MDLTEVITGTLWNLSSHDSIKMEIVDHALHALTDEVII PHSGWEREPNEDCKPR
HIEWESVLTNTAGCLRNVSSEARRKLRECDGLVDALIFIVQAEIGQKSDS
KLVENCVCLLRNLSYQVHREIPAERYQEALPTVANSTGPHAASCFGAKKGK
GKKPTEDPANDTVDFPKRTSPARGYELLFQPEVVRIYISLLKESNTPAILEASAG
AIQNLCAGRWTYGRYIRSALRQEKALSARAELLTSEHERVVKAASGALRNLA
15 VDARNKELIGKHARP NLVKNLPGGQQNSSWNFSED TVVSILNTINEVIAENLE
AAKKLRETQGIEKLVLINKSGNRSEKEVRAAALVLQTIWGYKELRKPLEKEG
WKKSDFQVNLNNASRSQSSHSYDDSTLPLIDRNQKSDNNYSTLNERGDHNRT
LDRSGDLGDMEPLKGAPLMQKI
-COOH
20

Figure 40- Full-length Amino Acid Sequence (mCATNS) (SEQ ID NO: 98)

NH₂-MAVVIRLQGLPIVAGTMDIRHFFSGLTIPDGGVHIVGGELGEAFIVFATDE
 DARLGMMRTGGTIKGSKVTLSSKTEMQNMIELSRRRFETANLDIPPANASR
 SGPPSSSGMSSRVNLPATVPNFNNPSVVTATTSVHESNKNIQTFSTASVGTAP
 PSMGTSFGSPTFSSTIPSTASPMNTVPPPIPPIPAMPSLPPLPSIPPVPPVPTLP
 5 PVPPVPPIPPVPSVPPMTTLPPMSGMPPLNPPPVAPLPAGMNGSGAPIGLNNNM
 NPVFLGPLNPVNSIQMNSQSSVKSLPINPDDLYVSVHGMPFSAMENDVREFFH
 GLRVDVAVHLLKDHVGRNNGNGLVKFLSPQDTFEALKRNRMLMIQRYVEVSPA
 TERQWVAAGGHITFKQSMGPSGQAHPPPQTLPRSKSPSGQKRSRSPHEAGF
 CVYLKGLPFEAENKHVIDFFKKLDIVEDSIYIAYGPNGKATGEGFVEFRNDAD
 10 YKAALCRHKQYMGNRFIQVHPITKKGMLEKIDMIRKRLQNFSYDQRELVLNP
 EGEVSSAKVCAHITNIPFSITKMDVLQFLEGIPVDENAVHVLVDNNGQGLGQA
 LVQFKTEDDAHKSEHLHRKKLNGREAFVHIVTLEDMREIEKNPPAQGKKGLK
 ISVPGNPAVPVIPSAGMPAAGIPTAGIPGAGLPSAGMPGAGMPSSGMPGPGMP
 GPGIPGAGIPGPAMPGPAMPGPAMPGPAMPGPAMPGPAMPGPAMPGPAMPGP
 15 AIPGPAIPGPAIPGPAIPGPTIPGAGIPSAGGEEHVFLTVGSKEANNGPPFNFGN
 FGGPNAFGPPLPPPGLGGGGAFGDARPGMPVSGNSGLPGLGLDVPFGGGGNN
 ISGPSGFGGIPQNFNGPGSLNAPPGFGSGPPGLGSVPGHLSGPPAFGPGPGPGL
 IHIGGPPGFGASSGKPGPTIHKVQNMPTVTSIDEILDFFYGYQVIPGSVCLKYNE
 KGMPTGEAMVAFESRDEATAAVIDLNDRPIGSRKVKLVLG
 20 -COOH

Figure 41- Full-length Amino Acid Sequence (mSWAN) (SEQ ID NO: 99)

NH₂-KEGRREHAFVPEPFTGTNLAPSLWLHRFEVIDDLNHWDHATKLRFLKES
LKGDALDVYNGLSSQAQGDFSFKQALLRAFGAPGEAFSEPEEVLFANSMGK
GYYLKGKVGHPVVRFLVDSGAQSVVHPALWEEVTDGDLDTLRPFNNVVKV
ANGAEMKILGVWDTEISLGKTKLKAFLVANASAEAAIIGTDVLQDHNAVLDF
5 EHRTCTLKGKKFRLLPVGSSLEDEFDLELIEEEEGSSAPEGSH
-COOH

Figure 42- Partial Amino Acid Sequence (m2300003P22Rik(248)) (SEQ ID NO: 100)

NH₂-SPYSPRGGSNVIQCYRCGDTCKGEVVRVHNNHFHIRCFTCQVCGCGLAQ
SGFFFKNQEYICAQDYQQLYGTRCDSCRDFITGEVISALGRTYRPKCFVCSLCR
KPFPIGDKVTFSGKECVCQTCSQSMTSSKPIKIRGPSHCAGCKEEIKHGQSLLA
LDKQWHVSCFKCQTCSVILTGEYISKDGVPYCESDYHSQFGIKCETCDRYISGR
5 VLEAGGKHYHPTCARCVRCHQMFTEGEEMYLTGSEVWHPICKQAARAEKK
-COOH

Figure 43 Partial Amino Acid Sequence (mTAKEDA015) (SEQ ID NO: 75)

NH₂-MEVEQEQRRRKVEAGRTKLAHFRQRKTKGDSSHSEKKTAKRKGS AVDA
SVQEESPVTKEDSALCGGGDICKSTSCDDTPDGAGGAFAAQPEDCDGEKRED
LEQLQQKQVNDHPPEQCGMFTVSDHPPEQHGMFTVGDHPPEQGRGMFTVSDH
PPEQHGMFTVSDHPPEQGRGMFTISDHQPEQGRGMFTVSDHTPEQRGIFTISDHPA
5 EQRGMFTKECEQECELAITDLESGREDEAGLHQSQAVHGLELEALRLSLSNM
HTAQLELTQANLQKEKETALTELREMLNSRRAQELALLQSRQQHELELLREQ
HAREKEEVVLRGQEA AELKEKLQSEMEKNAQIVKTLKEDWESEKDLCLEN
LRKELSAKHQSEMEDLQNQFQKELAEQRAELEKIFQDKNQAERALRNLESHH
QAAIEKLREDLQSEHGRCLEDLEFKFKESEKEKQLELENLQASYEDLKAQSQE
10 EIRRLWSQLDSARTSRQELSELHEQLLARTSRVEDLEQLKQREKTQHESELEQL
RIYFEKKLRDAEKTYQEDLTLLQORLQGAREDALLDSVEVGLSCVGLEEKPE
KGRKDHVDELEPERHKESLPRFQAELEESHRHQLEALESPLCIQHEGHVSDRC
CVETSALGHEWRLEPSEGHQSQELPWVHLQGVQDGDLEADTERAARVLGLET
EHKVQLSLLQTELKEEIELLKIENRNLYGKLQHETRLKDDLEKVKHNLIEDHQ
15 KELNNAKQKTELMKQEFQRKETDWKVMKEELQREAEKLTLMLELREKAE
SEKQTIINKFELREAEMRQLQDQQAQILDLERSLTEQQGRLQQLEQDLTSD
ALHCSQCGRPPTAQDGELAAHLVKEDCALQLMLARSRFLEERKEITEKFSAE
QDAFLQEAQEQHARELQLLQERHQQLLSVTAELEARHQAAALGELTASLESK
QGALLAARVAELQTKHAADLGALETRHLSSLDSESCYLSEFQTIREEHRQAL
20 ELLRADFEEQLWKKDSLHQTILTQELEKLKRKHEGELQSVRDHLRTEVSTELA
GTVAHELQGVHQGEFGSEKKTALHEKEETLRLQSAQAQPFHQEEKESLSLQL
QKKNHQVQQKDKQVLSLSHEIEECRSELEVLQQRRERENREGANLLSMLKAD
VNLSHSERGALQDALRRLGLFGETLRAAVTLRSRIGERVGLCLDDAGAGLA
LSTALALEEMWSDVALPELDRTLSECAEMSSVAEISSHMCEFLMSPEVRECE
25 QPIRRVFQSLSLAVDGLMEMALDSSSQLEEARQIHSRFEKEFSFKNEETAQVVR
KHQELLECLKEESA AKAELALELHKQTQGTLEGFKVETADLKEVLGKEDSEH
RLVLELESRLRQLQQA AQEAALREECTRLWSRGEATATDAEAREAAALRKEV
EDLTKEQSETRKQAEKDRSALLSQMKILESELEEQLSQHRGCAKQAEAVTALE
QQVASLDKHLRNQRQFMDEQA AEREHEREEFQQEIQRLLEGQLRQAAKPQPW
30 GPRDSQQAPLDGEVELLQQKLREKLDEFNELAIQKESADRQVLMQEEEIKRLE
EMNINIRKKVAQLQEEVEKQKNIVKGLEQDKEVLKKQQMSSLLLASTLQSTL
DAGRCPEPPSGSPPEGPEIQLEVTQRALLRRESEVLDLKEQLEKMKGDLESKN
EILHLNLKLDMQNSQTAVSLRELEEENTSLKVIYTRSSEIEELKATIENLQENQ
KRLQKEKAEEIEQLHEVIEKLQHEL SLMGPVVHEVSDSQAGSLQSELLCSQAG
35 GPRGQALQGELEAALEAKEALSRLADQERRHSQALEALQORLQGAEAAE
LQLAELERNVALREAEVEDMASRIQEFEAALKAKEATIAERNLEIDALNQRKA
AHS AELEAVLLALARIRRALEQQPLAAGAAPPELQWLRAQCARLSRQLQVLH
QRFLRCQVELDRRQARRATAHTRVPGAHPQPRMDGGAQAQVTGDVEASHDA
ALEPVPDPQGDLPVLVTLKDAPLCKQEGVMSVLTVCQRQLQSELLLVKNE
40 MRLSLEDGGKGKEKVLEDCQLPKVDLVAQVKQLQEKLNRLLYSMTFQNVDA
ADTKSLWPMASAHLLLESSWSDSDGEEPDISPHIDTCDANTATGGVTDVIKN
QAIDACDANTTPGGVTDVIKNWDSLIPDEMPDSPIQEKSECQDRSLSSPTSVLG
GSRHQSHTA EAGPRKSPVGMLDLSSWSSPEVLRKDWTLPEWPSLPVTPHSGA
LSLCSADTSLGDRADTSLPQTQGPGLLCSPGVSAAALALQWAESPADDHHV
45 QRTAVEKDVEDFITTSFDSQETLSSPPPGLEGKADRSEKSDGSGFGARLSPGSG
GPEAQTAGPVT PASISGRFQPLPEAMKEKEVRPKHV KALLQMVRDESHQILAL
SEGLAPPSGEPHPPRKEDEIQDISLHGGKTQEVPTACPDWRGDLLQVVQEAFE
KEQEMQGVELQPRLSGSDLGGHSSLLERLEKIIREQGD LQEKSLHLRLPDRSS
LLSEIQALRAQLRMTHLQNQEKLQHLRTALTS AEARGSQQEHLRRQVELLA
50 YKVEQEKCIAGDLQKTLSEEQEKANSVQKLLAAEQTVVRDLKSDLCESRQKS

EQLSRSLCEVQQEVLQLRSMMLSSKENELKAALQELESEQGKGRALQSQLEEE
QLRHLLQRESQSAKALEELRASLETQRAQSSRLCVALKHEQTAKDNLQKELRIE
HSRCEALLAQERSQLSELQKDLAAEKSRTELESEALRHERLLTEQLSQRTQEA
CVHQDTQAHHALLQKLKEEKSRVVDLQAMLEKVQQQALHSQQQLEAEAQK
5 HCEALRREKEVSATLKSTVEALHTQKRELRCSLEREREKPAWLQAELEQSHPR
LKEQEGRKAARRSAEARQSPAAAEQWRKWQRDKEKLRELELQRQRDLHKIK
QLQQTVRDLESKDEVPGSRLHLGSARRAAGSDADHLREQQRELEAMRQRL
SAARLLTSFTSQAVDRTVNDWTSSNEKAVMSLLHTLEELKSDLSRPTSSQKKM
AAELQFQFVDVLLKDNVSLTKALSTVTQEKLELSRAVSKLEKLLKHHLQKGC
10 SPSRSERSAWKPDETAPQSSLRRPDPGRLPAAASEEAHTSNVKMEKLYLHYLR
AESFRKALIQKKYLLLLIGGFQDSEQETLSMIAHLGVFPSKAERKITSRPFTRF
RTAVRVVIAILRLRFLVKKWQEVDRKGALAQGKAPRPGPRARQPQSPPTRES
PPTRDVPSGHTRDPARGRRLAAAASPHSGGRATPSPNSRLERSLTASQDPEHSL
TEYIHHLEVIQQRLGGVLPDSTSKKSCHPMIKQ
15 -COOH

Figure 44- Full-length Amino Acid Sequence (PCNT2) (SEQ ID NO: 101)

NH₂-MADNEKLDNQRLKNFKNKGRDLETMRRQRNEVVVELRKNKRDEHLLK
RRNVPHECEDSDIDGDYRVQNTSLEAIVQNASSDNQGIQLSAVQAARKLLS
SDRNPPIDDLIKSGILPILVHCLERDDNPSLQFEAAWALTNIASGTSEQTQAVVQ
SNAVPLFLRLLHSPHQNVCEQAVWALGNIIGDGPQCRDYVISLGVVKPLLSFIS
5 PSIPITFLRNVTWVMVNLCRHKDPPPPMETIQEILPALCVLIHHTDVNILDVTV
WALSYLTDAGNEQIQMVIDSGIVPHLVPLLSHQEVKVQTAALRAVGNIVTGTD
EQTQVVLNCDALSHFPALLTHPKEKINKEAVWFLSNITAGNQQQVQAVIDANL
VPMIIHLLDKGDFGTQKEAAWAISNLTISGRKDQVAYLIQQNVIPPCNLLTVK
DAQVVQVVLNCDALSHFPALLTHPKEKINKEAVWFLSNITAGNQQQVQAVIDANL
10 AYEIIDQFFSSDDIDEDPSLVPEAIQGGTGFNSSANVPTEGFQF
-COOH

Figure 45- Full-length Amino Acid Sequence (KPNA4) (SEQ ID NO: 102)

NH₂-MAFLDNPTIILAHIRQSHVTSDDTGMCCEMVLIDHDVDLEKIHPPSMPGDS
GSEIQGSNGETQGYVYAQSVDITSSWDFGIRRRSNTAQRLELRKERQNQIKC
KNIQWKERNKQSAQELKSLFEKKSLKEKPPISGKQSILSVRLEQCPLQLNNPF
NEYSKFDGKGHVGTATKKIDVYLPLHSSQDRLLPMTVVTMASARVQDLIGLI
5 CWQYTSEGREPKLNDNV SAYCLHIAEDDGEVDTDFPPLDSNEPIHKFGFSTLA
LVEKYSSPGLTSKESLFVRINAAHGFSLIQVDNTKVTMKEILLKAVKRRKGSQ
KVSGSRADGVFEEDSQIDIATVQDMLSSH HYKSFKVSMIHRLRFTTDVQLGIS
GDKVEIDPVTNQKASTKFWIKQKPISIDSDLLCACDLAEEKSPSHAIFKLTYLS
NHDYKHLYFESDAATVNEIVLKVNYILESRASTARADYFAQKQRKLNRRTSFS
10 FQKEKKSGQQ
-COOH

Figure 46- Full-length Amino Acid Sequence (MAPKAP1) (SEQ ID NO: 103)

NH₂-MIIYRDLISHDELFSDIYKIREIADGLCLEVEGKMVSRTEGAIDDSLIGGNA
SAEGPEGEGTESTVVTGV⁵VDIVMNHHLQETSFTKEAYKKYIKDYMKSLKGKLE
EQKPERVKPFMTGAAEQIKHILANFN¹⁰NYQFFIGENMNPDGMVALLDYREDGV
TPFMIFFKDGLEMEKC
-COOH

Figure 47- Full-length Amino Acid Sequence (mTPT1) (SEQ ID NO: 104)

NH₂-QSRSRFQLNLDKTIESCKAQLGINEISEDVYTAVEHSDSEDSEKSESSDRX
YVSDEEQKPKNEPEDPEDKEGSRVDKEAPAIKRKPKPTNQVEVKEEAKSNSPV
SEKPDPTPAKDKASPEPEKDFVEKAKPSPHPTKDKLKGKDETDSPTVHLGLDS
DSESELVIDLGEDPSGREGRKNKKDPKVPSPKQDAIGKPPPSSTSAGNQSPPET
5 PVLTRSATQAPAAGVTVAAATTSTMSTVTVTAPATAVTGSPVKKQRPLLPKETV
PAVQRVVWNASSKFQTSSQKWHMQKIQRQQQQQQQQQQSQQQSQQQQPQS
SQGTRYQTRQAVKAVQQKEVTQSPSTSTITLVTSTQPAALVSSSGSASTLASAI
NADLPIATASADVAADIAKYTSKMMDAIKGTMTETIYNDLSKNTTGSTIAEIRRL
RIEIEKLQWLHQQELAEMKHNLELTMAEMRQSLEQERDRLIAEVKKQLELEK
10 QQAVDETKKKQWCANCKKEAIFYCCWNTSYCDYPCQQAHWPEHMKSTQS
ATAPQQEADAEASTETGNKSSQGNSSNTQSAPSEPASAPKEKEAPAEKSKDSS
NSTLDLSGSRETPSSMLLGSNQSSVSKRCDKQPAYTPTTTDHQPHPNYPAQKY
HSRSSKAGLWSSSEEKRASSRSEHSGGTSTKNLMPKESRESRLDAFWD
-COOH
15

Figure 48- Partial Amino Acid Sequence (mAK014397(679)) (SEQ ID NO: 105)

NH₂-MEAPGEGPCSESQVIPVLEEDPVDYGCEMQLLQDGAQLQLQLQPEEFVA
IADYTATDETQLSFLRGEKILILRQTTADWWGERAGCCGYIPANHLGKQLEE
YDPEDTWQDEEYFDSYGTLKLHLEMLADQPRTTKYHSVILQNKESLKDKVIL
5 VEDVVLPEKVDVLVSEWMGTCLLFEFMIESILYARDTWLKGDGHIWPTTAALH
LVPCSAEKDYHSKVLFWDNAYEFNLSALKSLAIKEFFSRPKSNHILKPEDCLSE
PCTILQLDMRTVQVPDLETMRGELRFDIQKAGTLHGFTAWFSVYFQSLEEGQP
QQVVSTGPLHPTTHWKQTLFMMDDPVPVHTGDVVHGFCCVTKKSGMEKAH
10 VCLSELGCHVRTRSHVSTELETGSFRSGGDS
-COOH

Figure 49- Full-length Amino Acid Sequence (mHRMT1L1) (SEQ ID NO: 106)

NH₂-MATSGDCPRSESQGEEPAECSEAGLLQEGVQPEEFVAIADYAATDETQLS
FLRGEKILILRQTTADWWGERAGCCGYIPANHVGKHVDEYDPEDTWQDEE
YFGSYGTLKLHLEMLADQPRTTKYHSVILQNKESLTDKVILDVGC GTGIISLFC
AHYARPRAVYAVEASEMAQHTGQLVLQNGFADIITVYQQKVEDVVLPEKVDV
5 LVSEWMGTCLLKQQSSEGDASKDTTGVLDCCQTI
-COOH

Figure 50- Full-length Amino Acid Sequence (HRMT1L1(241)) (SEQ ID NO: 107)

NH₂-RRGRSRETNEEPPPPTVQVQGGPGPQREEKQKTKMAKFVIRPATAADCSDI
LRLIKELAKYEYMEEQVILTEKDLLEDGFGEHPFYHCLVAEVPKEHWTPEGHS
IVGFAMYYFTYDPWIGKLLYLEDDFFVMSDYRGFGIGSEILKNLSQVAMRCRCS
SMHFLVAEWNEPSINFYKRRGASDLSSEEGWRLFKIDKEYLLKMATEE
5 -COOH

Figure 51- Partial Amino Acid Sequence (SAT(204)) (SEQ ID NO: 108)

NH₂-FCELSSPAEMANVLCNRARLVSYLPGFCSLVKRVVNPKAFSTAGSSGSDE
SHVAAAPPDICSRTVWPDETMGPFQDQRFQLPGNIGFDCHLNGTASQKKSL
VHKTLPDVLAEPLSSERHEFVMAQYVNEFQGNDAPVEQEINSAETYFESARV
ECAIQTCPPELLRKDFESLFPEVANGKLMILTVTQKTKNDMTVWSEEVEIEREV
5 LLEKFINGAKEICYALRAEGYWADFIDPSSGLAFFGPYTNNTLFETDERYRHLG
FSVDDLGCCKVIRHSLWGTHVVVGSIFTNATPD SHIMKKLSGN
-COOH

Figure 52- Partial Amino Acid Sequence (BC023995(305)) (SEQ ID NO: 109)

NH₂-MTTQAPTFTQPLQSVVVLEGSTATFEAHISGFPVPEVSWFRDQVISTSTL
PGVQISFSDGRAKLTPAVTKANSGRYSLKATNGSGQATSTAELLVKAETAPPN
FVQRLQSM TVRQGSQVRLQVRVTGIPTPVVKFYRDGAEIQSSLD FQISQEGDL
YSLLIAEAYPEDSGTYSVNATNSVGRATSTAELLVQGEEVPAKKT KTIVSTAQI
5 SESRQTRIEKKIEAHFDARS IATVEMVIDGAAGQQLPHKTPPRIPPKPKSRSP TP
PSIAAKAQLARQQSPSPIRHSPSPVRHVRAPTPSPVRSVSPAARISTSPIRSVRSP
LLMRKTQASTVATGPEVPPPWKQEGYVASSSEAEMRETTLTSTQIRTEERWE
GRYGVQEQTISGAAGAAASVSASASYAAEAVATGAKEVKQDADKSAAVATV
VAAVDMARVREPVISAVEQTAQRTTTTAVHIQPAQEQRKEAEKTAVTKVVVA
10 ADKAKEQELKSRTKEVITTKQEQMHVTHEQIRKETEKTFVPKVVISAAKAKE
QETRISEEITKKQKQVTQEAIMKETRKT VVPKVIVATPKVKEQDLVSRGREGIT
TKREQVQITQEKMRKEAEKTALSTIAVATAKAKEQETILRTRET MATRQEIQV
THGKVDVGKKA EAVATVVAVDQARVREPREPGHLEESYAQQTTLEYGYKER
ISAAKVAEPPQRPASEPHVVPKAVKPRVIQAPSETHIKTTDQKGMHISSQIKKTT
15 DLTERLVHVDKRPRTASPHFTVSKISVPKTEHGYEASIAGSAIATLQKELSATS
SAQKITKSVKAPT VKPSETRVRAEPTPLPQFPFADTPDTYKSEAGVEVKKEVG
VSITGTTVREERFEVLHGREAKVTETARVPAPVEIPVTPPTLV SGLKNVTVIEGE
SVTLECHISGYPSPTVTWYREDYQIESSIDFQITFQSGIARLMIREAFAEDSGRF
TCSAVNEAGTVSTSCYLAVQVSEEFEKETTAVTEKFTTEEKRFVESRDV VMTD
20 TSLTEEQAGPGEP AAPYFITKPVVQKLVEGGSVVFGCQVGGNPKPHVYWKKS
GVPLTTGYRYKVSYNKQTGECKLVISMTFADDAGEYTIVVRNKHGETSASAS
LLEEADYELLMKSQQEMLYQTQVTA FVQEPKVGETAPGFVYSEYEKEYEKEQ
ALIRKKMAKDTVVVRTYVEDQEFHISSFEERLIKEIEYRIKTTLEELLEEDGEE
KMAVDISESEAVESGFDLR IKNYRILEGMGVTFHCKMSGYPLPKIAWYKD GK
25 RIKHGERYQMDFLQDGRASLRIPVVLPEDEGIYTAFASNIKGNAICSGKLYVEP
AAPLGAPTYIPTLEPVSRIRSLSPRSVSRSPIRMSPARMSPARMSPARMS
PGRRL EETDESQLERLYKPVFVLKPVSFKCLEGQTARFDLKVVG RMPMPETFWF
HDGQQIVNDYTHKVVIKEDGTQSLIIVPATPSDSGEWTVVAQNRAGRSSISVIL
TVEAVEHQVKPMFVEKLKNVNIKEGSRLEMKVRATGNPNPDIVWLKNSDIIV
30 PHKYPKIRIEGTKGEAALKIDSTVSQDSAWYTATAINKAGRDTTRCKVNVEVE
FAEPEPERKLIIPRGTYRAKEIAAPELEPLHLRYGQEQWEEGDLYDKEKQKQKPF
FKKKLTSLRLKRF GPAHFECRLTPIGDPTMVVEWLHDGKPLEAANRLRMINEF
GYCSLDYGVAYS RDSGIITCRATNKYGTDHTSATLIVKDEKSLVEESQLPEGRK
GLQRIEELERMAHEGALTGVTTDQKEKQKPDIVLYPEPVRVLEGETARFCRV
35 TGYPQPKVNWYLNGLIRKSKRFRVRYDGIHYLDIVDCKSYDTGEVKVTAEN
PEGVIEHKVKLEIQQREDFRSVLRRAPEPRPEFHVHEPGKLQFEVQKVDRPVD
TTETKEVVKLKRAERITHEKVPEESEELRSKFKRRTEEGY YEAITAVELKS RKK
DESYEELLRKTKDELLHWT KELTEEEKKALAE EGKITIPTFKPKDIELSPSMEA
PKIFERIQSQTVGQGS DAHFRVRVVGKPDPECEWYKNGVKIERSDRIYWYWP
40 EDNVCELVIRDVTAEDSASIMVKAINIAGETSSHAFLLVQAKQLITFTQELQDV
VAKEKDTMATFECETSEPFVKVKWYKDGMEVHEGDKYRMHSDRKVHFLSIL
TIDTSDAEDYSCVLVEDENVKTTAKLIVEGAVVEFVKELQDIEVPESYSGELEC
IVSPENIEGK WYHNDVELKSNKYTITSRRGRQNLT VKDVTKEDQGEYSFVID
GKKTTCKLKMKPRPIAILQGLSDQKVCEGDIVQLEVKVSLESVEGVWMKDG
45 QEVQPSDRVHIVIDKQSHMLLIEDMTKEDAGNYSFTIPALGLSTSGRVSVYSV
DVITPLKDVNVIEGTKAVLECKVSVPDVT SVKWYLNDEQIKPDDRVQAIVKG
TKQRLVINRTHASDEGPYKLIVGRVETNCNLSVEKIKIIRGLRDLTCTETQNVV
FEVELSHSGIDVLWNFKDKEIKPSSKYKIEAHGKIYKLTVLNMMK DDEGKYTF
YAGENITSGKLT VAGGAISKPLTDQTVAESQEAVFECEVANPDSKGEWLRD GK
50 HLPLTNNIRSESDGHKRRLLIAATKLDDIGEYTYKVATSKTS AKLKVEAVKIKK

TLKNLTVTETQDAVFTVELTHPNVKGQWIKNGVVLESNEKYAISVKGTIYSL
RIKNCAIVDESUYGFRGLGASARLHVETVKIHKPKDVTALENATVAFEVS
VSHDTPVKWFHKSVEIKPSDKHRLVSEKRVHKLMLQNISPSDAGEYTAVVG
QLECKAKLFFVETLHITKTMKNIEVPETKTASFECEVSHFNVPSMWLKNNGVEIE
5 MSEKFKIVVQGLHQLIIMNTSTEDSAEYTFVCGNDQVSATLTVTPIMITSMLK
DINAEKDTITFEVTVNYEGISYKWLKNNGVEIKSTDCKQMRTKKLTHSLNIRN
VHFGDAADYTFVAGKATSTATLYVEARHIEFRKHIKDIKVEKKRAMFECEVS
EPDITVQWMKDDQELQITDRIKIQKEYVHRLIPSTRMSDAGKYTVVAGGN
VSTAKLFVEGRDVRIRSIIKEVQVIEKQRAVVEFEVNEDDVDAHUYKDGIEIN
10 FQVQERHKYVVERRIHRMFISETRQSDAGEYTFVAGRNRSSVTLYVNAPEPPQ
VLQELQPVTVQSGKPARFCAVISGRPPKISWYKEEQLLSTGFKCKFLHDGQE
YTLLEIAFPEDAAYTCEAKNDYGVATTSASLSVEVPEVVSPPDQEMPVYPPAI
ITPLQDVTVSEGQPARFQCRVSGTDLKVSWSKDKKIKPSRFFRMTQFEDTYQ
LEIAEAYPEDEGTYTFVASNAVGGVSSTANLSLEVQALDRQSSGKDVRESTKS
15 QAVADSSFTKEESKISQKEIKSFQGSSEYEVQVFESVSQSSHTAASVQDTQLC
HTASLSQIAESTELSKECAKESTGEAPKIFLHLQDVTVKCGDTAQFLCVLKDDSD
FIDVTWTHEGAKIEESERLKQSQNGNIQFLTICNVQLVDQGLYSCIVHNDGGER
TTSAVLSVEGAPESILHERIEQEIEMEMKEFSSSFLSAEEGLHSAELQLSKINET
LELSESPVYSTKFDSEKEGTGPIFIKEVSNADISMGDVATLSVTVIGIPKPKIQ
20 WFFNGVLLTPSADYKFVFDGDDHSLILFTKLEDEGEYTCMASNDYGKTICSA
YLKINSKGEGHKDTETESAVAKSLEKLGGPCPPHFLKELKPIRCAQGLPAIFEY
TVVGEPAPTVTWFKENKQLCTSVYYTIIHNPNGSGTFIVNDPQREDSGLYICKA
ENMLGESTCAAELLVLEDTDMTDPCKAKSTPEAPEDFPQTPLKGPAVEALD
SEQEIAFTVKDTILKAALITEENQQLSYEHIAKANELSSQLPLGAQELQSILEQD
25 KLTPESTREFLCINGSIHFQPLKEPSNLQLQIVQSQKTFSKEGILMPEEPETQAV
LSDTEKIFPSAMSIEQINSLTVEPLKTLAEPEGNYPOSSIEPPMHSYLTSAEEV
LSPKEKTVSDTNREQRVTLQKQEAQSALILSLSLAEGHVESLQSPDVMISQVN
YEPLVPSEHSCTEGGKILIESANPLENAGQDSAVRIEEGKSLRFPALALEEKQVLL
KEEHSNDNVMPDQIIESKREPVAIKKVQEVQGRDLSKESLLSGIPEEQRLNL
30 KIQICRALQA AVASEQPLGFSEWLRNIEKVEVEAVNITQEPRHIMCMYLVTSK
SVTEEVTIIEDVDPQMANLKMELRDALCAIHYEIDILTAEGPRIQQGAKTSLQ
EEMDSFSGSQKVEPITEPEVESKYLISTEEVSFNVQSRVKYLDATPVTKGVAS
AVVSDEKQDES LKPSEEKEESSSESGETEVATVKIQEAEGGLIKEDGPMIHTPLV
DTVSEEGDIVHLTTSITNAKEVNWYFENKLVPSEKFKCLQDQNTYTLVIDKV
35 NTEDHQGEYVCEALNDSGKTATSALTVVKRAAPVIKRIEPLVALGHLAKF
TCEIQSAPNVRQWFKAGREIYESDKCSIRSSKYISSLEILRTQVVDCEYTC
ASNEYGSVSCTATLTVTPGGEKKVRKLLPERKPEPKEEVVLKSVLRKRPEEE
EPKVEPKKLEKVKKPAVPEPPPPKPVEEVEVPTVTKRERKIPETKVPEIKPAIP
LPAPEPKPKPEAEVKTIKPPPVEPEPTPIAAPVTVPVVGKKA EAKAPKEEAAKP
40 KGPIKGVPKKTPSPIEAERRKLRPGSGGEKPPDEAPFTYQLKAVPLKFVKEIKDI
ILTESEFVGSSAIFECVLPSTAITTWMKDGSNIRESPKHRFIADGKDRKLHIIDV
QLSDAGEYTCVLRNLGNKEKTSTAKLVVEELPVRVFKTLEEEVTVVKGQPLYLS
CELNKERDVVWRKDGKIVVEKPGRIVPGVIGLMRALTINDADDTAGTYTVT
VENANNLECSSCVKVVEVIRDWLVPKPIRDQHV KPKGTAIFACDIAKDTPNIKW
45 FKGYDEIPAEPNDKTEILRDGNHLYLKIKNAMPEDIAEYAVEIEGKRYPAKLT
GEREVLLKPIEDVTIYEKESASFDAEISEADIPGQWKLKGELLRPSPTCEIKAE
GGKRFLT LHKVKLDQAGEVLYQALNAITTAITLVKEIELDFAVPLKDVTVPERR
QARFECVLTREANVIWSKGPDIKSSDKFDIADGKKHILVINDSQFDDEGVYT
AEVEGKKTSARLFVTGIRLKFMSPLEDQTVKEGETATFVCELSHEKMHVWF
50 KNDAKLHTSRTVLISSEGKTHKLEMKEVTLDDISQIKAQVKELSSTAQLKVL

ADPYFTVKLHDKTAVEKDEITLKCEVSKDVPVKWFKDGEEIVPSPKYSIKADG
LRRILKIKKADLKDKGEYVCDGTDKTKANVTVEARLIKVEKPLYGVEVFVG
ETAHFEIELSEPDVHGQWKLKGQPLTASPDCEIIEDGKKHILILHNCQLGMTGE
VSFQAANAKSAANLKV KELPLIFITPLSDVKVFEKDEAKFECEVSREP KTRFW
5 LKGTQEITGDDRFELIKDGTKHSMVIKSAAFEDEAKYMFEAEDKHTSGKLIIE
GIRLKFLTPLKDVTAKEKESAVFTVELSHDNIRVKWFKNDQRLHTTRSVSMQD
EGKTHSITFKDLSIDDTSQIRVEAMGMSSEAKLTVLEGDPYFTGKLQDYTGVE
KDEVILQCEISKADAPVKWFKDGKEIKPSKNAVIKADGKKRMLILKKALKSDI
GQYTCDCGTDKTSGLDIEDREIKLVRPLHSVEVMETETARFETEISEDDIHAN
10 WKLKGEALLQTPDCEIKEEGKIHSVLHNCRLDQTGGVDFQAANVKSSAHLR
VKPRVIGLLRPLKDVTVTAGETATFDCELSYEDIPVEWYLGKKLEPSDKVVP
RSEGVHTLTLRDVKLEDAGEVQLTAKDFKTHANLFFVKEPPVEFTKPLEDQT
VEEGATAVLECEVSRENAKVWFKNGTEILKSKKYEIVADGRVRKLVIHDCPT
EDIKTYTCDAKDFKTSCNLNVVPPHVEFLRPLTDLQVREKEMARFECELSREN
15 AKVKWFKDGAEIKKGKKYDIISKGAVRILVINKCLLDDEAEYSCEVRTARTSG
MLTVLEEEAVFTKNLANIEVSETDTIKLVCEVSKPGAEEVIWYKGDEEIIETGRY
EILTEGRKRILVIQNAHLEDAGNYNCRLPSSRTDGKVKVHELAAEFISKPNLE
ILEGEKAEFVCSISKESFPVQWKRDDKTLES GDKYDVIADGKKRVLVVKDATL
QDMGTYVVMVGAARAAH LTVIEKL RIVVPLKDTRVKEQQEVVFNCEV NTE
20 GAKAKWFRNEEAIFDSSKYIILQKDLVYTLRIRDAHLDDQANYNVSLTNHRGE
NVKSAANLIVEEEDLRIVEPLKDIETMEKKSVTFWCKVNRLNVT LKWTKNGE
EVPFDNRVSYRVDKYKHMLTIKDCGFPDEGEYIVTAGQDKSVAELLIIEAPTEF
VEHLEDQTVTEFDDAVFSCQLSREKANVKWYRNGREIKEGKKYKFEKDGSIH
RLIHKDCRLDDECEYACGVEDRKSRLRFVEEIPVEIIRPPQDILEAPGADVFL
25 AELNKDKVEVQWLRNNMVVVQGDKHQMMSEGKIHRLQICDIKPRDQGEYR
FIAKDKEARAKLELAAAPKIKTADQDLVVDVGKPLTMVVPYDAYPKAEAEW
FKENEPLSTKTIDTTAEQTSFRILEAKKGDKGRYKIVLQNKHGKAEGFINLKVI
DVPGPVRNLEVTTETFDGEVSLAWEEPLTDGGSKIIGYVVERRDIKRKTWVLAT
DRAESCEFTVTGLQKGGVEYLF RV SARNRVGTGEPVETDNPVEARSKYDVP
30 PPLNVTITDVNRFGVSLTWEPPEYDGGAEITNYVIELRDKTSIRWDTAMTVRA
EDLSATVTDVVEGQEYSFRVRAQNRIGVGKPSAATPFVKVADPIERPSPPVNL
SSDQTQSSVQLKWEPP LKDGGSPI LGYIIERCEEKDNWIRCNM KLVPELTYK
VTGLEKG NKYLYRVSAENKAGVSDPSEILGPLTADDAFVEPTMDLSAFKDGLE
VIVPNPITILVPSTGYPRPTATWCFGDKVLETGDRVKMKTL SAYAE LVISPSERS
35 DKGIYTLKLENRVKTISGEIDVNVIARPSAPKELKFGDITKDSVHLTWEPPDDD
GGSPLTGYVVEKREVS RKTWTKVMDFTDLEFTVPDLVQGKEYL FKV CARN
KCGPGEPAYVDEPVNMSTPATVPDPPE NVKWRDRTANSIFLTWDPPKNDGGS
IKGYIVERCPRGSDKWVACGEPVAETKMEVTGLEEGK WYAYRVKALNRQGA
SKPSRPTEEIQAVDTQEAP EIFLDVKLLAGLTVKAGTKIELPATVTGKPEPKITW
40 TKADMILKQDKRITIENVPKKSTVTIVDSKRS DTGT YII EAVNVCGRATAVVEV
NVLDKPGPPAAFDITDVTNESCLLTWNPPRDDGGSKITNYVVERRATDSEVW
HKLSSTVKDTNFKATKLIPNKEYIFRVA AENMYGVGEPVQAS PITAKYQFDP
GPTRLEPSDITKDAVTLTWCEPDDDGGSPITGYWVERLDPD TDK WVR CNM
PVKDTTYRVKGLTNKKKYRFRVLAENLAGPGKPSKSTEPILIKDPIDPPWPPGK
45 PTVKDVGKTSVRLNWT KPEHDGGAKIESYVIEM LKTGTDEWVRVAEGVPTT
QHLLPGLMEGQEYSFRVRAVNKAGESEPSDPVLCREKLYPPSPPRWLEVIN
ITKNTADLKWTVPEKDGGSPITNYIVEKRDVRRKGWQTVDTTVKDTKCTVTP
LTEGSLYVFRVAAENAIGQSDYTEIEDSVLAKDTFTTPGPPYALAVDVTKRHV
DLKWEPPKNDGGRPIQRYVIEKKERLGTRWVKAGKTAGPDCNFRVTDVIEGT
50 EVQFQVRAENEAGVGHPSEPT EILSIEDPTSPSPPLDLHVTDAGRKHIAIAWK

PPEKNGGSPIIGYHVEMCPVGTEKWMRVNSRPIKDLKFKVEEGVVPDKEYVL
RVRAVNAIGVSEPSEISENVVAKDPDCKPTIDLETHDIIVIEGEKLSIPVPFRAVP
VPTVSWHKDGKEVKASDRLTMKNDHISAHLEVPKSVRADAGIYTITLENKLG
SATASINVKVIGLPGPCKDIKASDITKSSCKLTWEPPEFDGGTPILHYVLERREA
5 GRRTYIPVMSGENKLSWTVKDLIPNGEYFFRVKAVNKVGGGEYIELKNPVIAQ
DPKQPPDPPVDVEVHNPTAEAMTITWKPPLYDGGSKIMGYIIEKIAKGEERWK
RCNEHLVPILTYTAKGLEEGKEYQFRVRAENAAGISEPSRATPPTKAVDPIDAP
KVILRTSLEVVRGDEIALDASISGSPYPTITWIKDENVIVPEEIKKRAAPLVRRR
KGEVQEEEPFVLPLTQRLSIDNSKKGESQLRVRDSLRLPDHGLYMIKVENDHGI
10 AKAPCTVSVLDTPGPPINFVFEDIRKTSVLCKWEPPLDDGGSEIINYTLEKKDK
TKPDSEWIVVTSTLRHCKYSVTKLIEGKEYLFRVRAENRFGPGPPCVSKPLVA
KDPFGPPDAPDKPIVEDVTSNSMLVKWNEPKDNGSPILGYWLEKREVNSTHW
SRVNXSLLNALKANVDGLLEGLTYVFRVCAENAAGPGKFSPSPDPKTAHDPI
PPGPPIPRVTDTSSTTIELEWEPPAFNGGGEIVGYFVDKQLVGTNEWRSRCKTEKM
15 IKVRQYTVKEIREGADYKLRSVAVNAAGEGPPGETQPVTVAEPQEPPEAVELDV
SVKGGGIQIMAGKTLRIPAVVTGRPVPKVTWKEEGELDKDRVVIDNVGKSEL
IHKDALRKDHGRYVITATNSCGSKFAAARVEVFDVPGPVLDLKPVVTNRKMCL
LNWSDPEDDGGSEITGFIERKDAKMHTWRQPIETERSKCDITGLLEGQEYKFR
VIAKNKFGCGPPVEIGPILAVDPLGPPTSPERLTYTERTKSTITLDWKEPRSNGG
20 SPIQGYIIEKRRHDKPDFERNKRLCPTTSFLVENLDEHQMYEFRVKAVNEIGE
SEPSLPLNVVIQDDEVPTTIKLRLSVRGDTIKVKAGEPVHIPADVTGLPMPKIE
WSKNETVIEKPTDALQITKEEVSRSSEAKTELSIPKAVREDKGTYYTVTASNRLGS
VFRNVHVEVYDRPSPRNLAVIDIKAESCYLTWDAPLDNGGSEITHYVIDKRD
ASRKKAEWEEVTNTAVEKRYGIWKLIPNGQYEFVRVAVNKYGISDECKSDKV
25 VIQDPYRLPGPPGPKVLARTKGSMLVSWTPPLDNGGSPITGYWLEKREEGSP
YWSRVSRAPIKTVGLKGVEFNVPRLLEGVKYQFRAMAINAAGIGPPSEPSDPE
VAGDPIFPPPSCPEVKDKTKSSISLGWKPPAKDGGSPIKGYIVEMQEEGTTD
WKRVNEPDKLITTCECVVNLKELRKYRFRVKAVNEAGESEPSDTTGEIPATDI
QEEPEVFDIGAQDCLVCKAGSQIRIPAVIKGRPTPKSSWEFDGKAKKAMKDG
30 VHDIPEDAQLETAENSSVIIIPECKRSHTGKYSITAKNKAGQKTANCRVKVMD
VPGPPKDLKVSIDITRGSCRLSWKMPDDDGGDRIKGYVIEKRTIDGKAUTKVN
PDCGSTTFVVPDLLSEQQYFFRVRAENRFGIGPPVETIQRTTARDPIYPPDPPIKL
KIGLITKNTVHLSWKPPKNDGGSPVTHYIVECLAWDPTGTTKEAWRQCNRD
VEELQFTVEDLVEGGEYEFVRVKAVNAAGVSKPSATVGPCDCQRPDMPPSIDLK
35 EFMEVEEGTNVNIVAKIKGVFPPTLTWFKAPPKPDNKEPVLYDTHVNKLTV
DDTCTLVIPQSRSDTGLYTITAVNNLGTASKEMRLNVLGRPGLVPIKFESV
SADQMTLSWFPKDDGGSKITNYVIEKREANRKTWVHVSSEPKECTYTIPKLL
EGHEYVFRIMAQNKYGIGEPLDSEPETARNLFSVPGAPDKPTVSSVTRNSMTV
NWEEPEYDGGSPVTGYWLEMKDTTSKRWKRVNRDPIKAMTLGVSYKVVTGLI
40 EGSDYQFRVYAINAAGVGASLPSDPATARDPIAPPGLVFKVTDWTKSSADLE
WSPPLKDGGSKVTGYIVEYKEEGKEEWEKGKDKEVRGKLVVTGLKEGAFY
KFRVSAVNIAGIGEPGEVTDVIEMKDRLVSPDLQLDASVRDRIVVHAGGVIRII
AYVSGKPPPTVTWNMNERLTPQEATITTAISSSMVIKNCQRSHQGVYSLAK
NEAGERKKTIIVDVLDPGPVGTPLAHNLTNESCKLTWFSPEDDGGSPITNY
45 VIEKRESRRRAWTPVTYTVTRQNATVQGLIQGKAYFFRIAAENSIGMGPFVET
SEALVIREPITVPERPEDLEVKEVTKNVTLTWNPPKYDGGSEIINYVLESRLIG
TEKFHKVTNDNLLSRKYTVKGLKEGDTYEYRVSAVNIVGQKPSFCTKPITCK
DELAPPTLHLDFRDKLTIRVGEAFALTGRYSGKPKPKVSWFKDEADVLEDDRT
HIKTTPATLALEKIKAKRSDSGKYCVVENSTGSRKGFCQVNVVDRPGPPVGP
50 VSFDEVTKDYMVISWKPLDDGGSKITNYIIEKKEVGKDVWMPVTSASAKTT

CKVSKLLEGKDYIFRIHAENLYGISDPLVSDSMKAKDRFRVPDAPDQPIVTEVT
KDSALVTWNKPHDGGKPITNYILEKRETM SKRWARVTKDPIHPYTKFRVPDLL
EGCQYEFVSAENEIGIGDPSPPSKPVFAKDPIAKSPPPVNPEAIDTTCNSVDLT
WQPPRHDGGSKILGYIVEYQKVGDEEWRRANHTPESCPETKYKVTGLRDGQ
5 TYKFRVLAVNAAGESDPAHVPEPVLVKDRLEPPELILDANMAREQHIKVGDTL
RLSAIIKGVFPFKVTWKEDRDAPTKARIDVTPVGSKLEIRNAAHEDGGIYSLT
VENPAGSKTVSVKVLVLDKPGPPRDLEVSEIRKDCYLTWKEPLDDGGSVITN
YVVERRDVASAQWSPLSATSKKKSHFAKHLNEGNQYLFRVAAENQYGRGPFV
ETPKPIKALDPLHPPGPPKDLHHVDVDKTEVSLVWNKPDRDGGSPITGYLVEY
10 QEEGTQDWIKFKTVTNLECVVTGLQQGKTYRFRVKAENIVGLGLPDTTPIEC
QEKLVPPSVELDVKLIEGLVVKAGTTVRFPPIIRGVPTAKWTTDGGSEIKTDE
HYTVETDNFSSVLTIKNCLRRDTGEYQITVSNAAGSKTVAVHLTVLDVPGPPT
GPINILDVTPHEMTISWOPPKDDGGSPVINIYVEKQDTRKDTWGVVSSGSSKT
KLKIPHLQKGCEYVFRVRAENKIGVGPPLDSTPTVAKHKFSPPSPPGKPVVTDI
15 TENAATVSWTLPKSDGGSPITGYMERREVTGKWVRVNKTPIADLKFRVTGL
YEGNTYEFVFAENLAGLSKSPSSDPIACRPIKPPGPPINPKLKDKSRETADL
VWTKPLSDGGSPILGYVVECQKPGTAQWNRINKDELIRQCAFRVPGLIEGNEY
RFRIKAANIVGEGEPRELAESVIAKDILHPPEVELDVTCDVITVRVGQTIRILA
RVKGRPEPDITWKEGKVLVREKRVDLIQDLPRVELQIKEAVRADHGKYIISAK
20 NSSGHAQGSIVNVLD RPGPCQNLKVTNVTKENCTISWENPLDNGGSEITNFI
VEYRKPNQKGWSIVASDVTKRLIKANLLANNEYFRVCAENKVGVGPTIETK
TPILAINPIDRPGEPENLHIADKGKTFVYLKWRRPDYDGGSPNLSYHVERRLK
GSDDWERVHKGSIKETHYMDRCVENQIYEFVQTKNEGGEVDWKTEEVV
VKEDLQKPVLDLKLSGVLTVKAGDTIRLEAGVRGKPFPEVAWTKDKDATDLT
25 RSPRVKIDTRADSSKFSLTAKRSDGGKYVVTATNTAGSFVAYATVNVLDKPG
PVRNLKIVDVSSDRCTVCWDPPEDDGGCEIQNYILEKCETKRMVWSTYSATV
LTPGTTVTRLIEGNEYIFRVRAENKIGTGPPTESKPVIKTKYDKPGRPDPEVT
KVSKEEMTVVWNPPEYDGGKSITGYFLEKKEKHSTRWVPVNKSAIPERRMK
VQNLLPDHEYQFRVKAENEIGIGEPSLPSRPVVAKDPIEPPGPPTNFRVVDTTK
30 HSITLGWGKPVYDGGAPIIGYVVMRPKIADASPDEGWKRCNAAAQLVRKEF
TVTSLDENQEYEFVCAQNQVGIGRPAELKEAIKPKILEPPEIDLDA SMRKL
IVRAGCPIRLFAIVRGRPAPKVTWRKVGIDNVVRKGQVDLVD TMAFLVIPNST
RDDSGKYSLT LVNPAGEKAVFVNVRVLDTPGPVSDLKVSDVT KTSCHVSWAP
PENDGGSQVTHYIVEKREADRKTWSTVTPEVKKTSFHV TNLVPGNEYFRVT
35 AVNEYGPGVPTDVPKPVLASDPLSEDP PRKLEVTEMTKNSATLAWLPPLRDG
GAKIDGYITSYREEEQPADRWTEYSVVKDL SLVVTGLKEGKKYKFRVAARNA
VGVSLPREAEGVYEAKEQLLPKILMPEQITIKAGKKLR IEAHVYGKPHPTCK
WKKGEDEVVTSSHLAVHKADSSSILIKDVTRKDSGYYS LTAENSSGTD TQKIK
VVVMDAPGPPQPPFDISDIDADACSLSWHIPLEDGGSNITNYIVEKCDVSRGD
40 WVTALASVTKTSCRVGKLI PGQEYIFRVRAENRFGISEPLTSPKMVAQFPFGVP
SEPKNARVTKVNKDCIFVAWDRPDS DGGSPIIGYLIERKERN SLLWVKANDTL
VRSTEYPCAGLVEGLEYSFRIYALNKAGSSPPSKPTEYVTARMPVDPPGKPEVI
DVTKSTVSLIWARPKHDGGSKIIGYFVEACKLP GDKWVRCNTAPHQIPQEEYT
ATGLEEKAQYQFRAIARTAVNISPPSESPDPTILAEN VPPRIDLSVAMKSLT
45 KAGTNVCLDATVFGKPMPTVSWKKDGTLLKPAEGIKMAMQRNLCTLELFSV
NRKDSGDYTITAENSSGSKSATIKLVLDKPGPPASVKINKMYSDRAMLSWEP
PLEDGGSEITNYIVDKRETSRPNWAQVSATVPITSCSVEK LIEGHEYQFRICAEN
KYGVGDPVFTEPAIAKNPYDPPGRCDPPVISNITKDHMTVSWKPPADDGGSPI
TGYLLEKRETQAVNWTKNRKPIERTLKATGLQEGTEYEFRTAINKAGPGK
50 PSDASKAAYARDPQYPPAPPAFPKVYDTRSSVSLSWGKPAYDGGSPIIGYLVE

VKRADSDNWVRCNLPQNLQKTRFEVTGLMEDTQYQFRVYAVNKIGYSDPSD
VPDKHYPKDILIPPEGELDADLRKTLILRAGVTMRLYVPVKGRPPPKITWSKP
NVNLRDRIGLDIKSTDFDTFLRCENVNKYDAGKYILTLENSCGKKEYTIVVKV
LDTGPPVNVTVKEISKDSAYVTWEPPIIDGGSPIINYVVQKRDAERKSWSTVT
5 TECSKTSFRVANLEEGKSYFFRVFAENEYGIGDPGETRDAVKASQTPGPVVDL
KVRSVSKSSCSIGWKKPHSDGGSRIIGYVVDLFTENKWQRMKSLSLQYSA
KDLTEGKEYTFRVSAENENGEGTPSEITVVARDDVVAPDLDLKGLPDLCLYLAK
ENSNFRLKIPIKGKPAPSVSWKKGEDPLATDTRVSVESSAVNTTLIVYDCQKSD
AGKYTITLKNVAGTKEGTISIKVVGKPGIPTGPIKFDEVTAEAMTLKWAPPKD
10 DGGSEITNYILEKRDSVNNKWVTCASAVQKTTFRVTRLHEGMEYTFRVSAEN
KYGVGEGGLKSEPIVARHPFDVPDAPPPNIVDVRHDSVSLTWDPKKTGGSPIT
GYHLEFKERNSSLWKRANKTPIRMRDFKVTGLTEGLEYEFRVMAINLAGVGK
PSLPSEPVALDPIDPPGKPEVINITRNSVTLIWTEPKYDGGHKLTGYIVEKRDL
PSKSWMKANHVNVPECAFTVTDLVEGGKYEFIRAKNTAGAISAPSESTETIIC
15 KDEYEAPTIVLDPTIKDGLTIKAGDTIVLNAISILGKPLPKSSWSKAGKDIRPSDI
TQITSTPTSSMLTIKYATRKGAGEYTITATNPFGTKVEHVKVTVLDVPGPPGPV
EISNVSAEKATLTWTPPLEDGGSPIKSYILEKRETSRLLWTVVSEDIQSCRHVAT
KLIQGNEYIFRVSAVNHYGKGEPVQSEPVKMVDRFGPPGPPEKPEVSNVTKNT
ATVSWKRPVDDGGSEITGYHVERREKKSRLWVRRAIKTPVSDLRCKVTGLQEG
20 STYEFRVSAENRAGIGPPSEASDSVLMKDAAYPPGPPSNPHVTDTTKKSASLA
WGKPHYDGGLEITGYVVEHQKVGDEAWIKDTTGTALRITQFVVPDLQTKKEK
YNFRISAINDAGVGEPVIPDVEIVEREMAPDFELDAELRRTLVRAGLSIRIFV
PIKGRPAPEVTWTKDNINLKNRANIENTESFTLLIPECNRYDTGKFVMTIENPA
GKKSGFVNVRVLDTPGPVLNLRPTDITKDSVTLHWDLPIDGGSRITNYIVEK
25 REATRKSYSSTATTKCHKCTYKVTGLSEGCEYFFRVMAENEYGIGEPTEPTEPV
KASEAPSPDLSNIMDITKSTVSLAWPKPKHDGGSKITGYVIEAQRKGSQWT
HITTVKGLECVVRNLTEGEEYTFQVMAVNSAGRSAPRESRPVIVKEQTMLPEL
DLRGIYQKLVIKAGDNIKVEIPVLGRPAPTWTWKKGDQILKQTRVNFETTA
TSTILNINECVRSDSGPYPLTARNIVGEVGDVITIQVHDIPGPPTGPIKFDEVSSD
30 FVTFSWDPPENDGGVPISNYVEMRQTDSTTWVELATTVIRTTYKATRLTTGL
EYQFRVKAQNRYGVGPGITSACIVANYPFKVPGPPGTPQVTAVTKDSMTISWH
EPLSDGGSPILGYHVERKERNLWQTVSKALVPGNIFKSSGLTDGIAYEFRVIA
ENMAGKSKPSKPSEPMLALDPIDPPGKPVPLNITRHTVTLKWAKPEYTGGFKI
TSYIVEKRDLPNGRWLKANFSNILENEFTVSGLTEDAAYEFRVIAKNAAGAIAP
35 PSEPSDAITCRDDVEAPKIKVDVKFKDTVILKAGEAFRLEADVSGRPPPTMEW
SKDGKELEGTAKEIKIADFSTNLVNKDSTRDSGAYTLTATNPGGFAKHIFNV
KVLDRPGPPEGPLAVTEVTSEKCVLSWFPPLDDGGAKIDHYIVQKRETSRLAW
TNVASEVQVTKLKVTKLLKGNEYIFRVMAVNKYGVGEPLESEPVLAVNYPGP
PDPPKNPEVTTITKDSMVVCWGHPSDGGSEIINYIVERRDKAGQRWIKCNKK
40 TLTDLRYKVSGLTEGHEYEFRIMAENAAGISAPSPTSPFYKACDTVFKPGPPGN
PRVLDTSRSSISIAWNKPIYDGGSEITGYMVEIALPEEDEVQIVTPPAGLKATSY
TITGLTENQEYKIRIYAMNSEGLGEPALVPGTPKAEDRMLPPEIELDADLRKV
TIRACCTLRLFPVPIKGRPAPEVKWARDHGESLDKASIESTSSYTLLIVGNVNR
DSGKYILTVENSSGSKSAFVNVRVLDTPGPPQDLKVKEVTKTSVTLTWDPPLL
45 DGGSKIKNYIVEKRESTRKAYSTVATNCHKTSWKVDQLQEGCSYFRVLAEN
EYGIGLPAETAESVKASERPLPPGKITLMDVTRNSVLSWEKPEHDGGSRLGY
IVEMQTKGSDKWATCATVKVTEATITGLIQGEEYSFRVSAQNEKGISDPRQLSV
PVIKDLVIPPFAKLLFNTFTVLAGEDLKVDVPFIGRPTPAVTWHKDNVPLKQT
TRVNAESTENNSLLTIKDACREDVGHYVVKLTNSAGEAIETLNVIVLDKPGPP
50 TGPVKMDEVTAADSITLSWGPPKYDGGSSINNYIVEKRDTSTTTWQIVSATVAR

TTIKACRLKTGCEYQFRIAAENRYGKSTYLNSEPTVAQYPFKVPGPPGTPVVT
LSSRDSMEVQWNEPISDGGSRVIGYHLERKERNLSILWVKLNKTPIPQTKFKTT
GLEEGVEYEFVRVSAENIVGIGKPSKVSECYVARDPCDPPGRPEAIIVTRNSVTL
QWKKPTYDGGSKITGYIVEKKELPEGRWMKASFTNIIDTHFEVTGLVEDHRYE
5 FRVIARNAAGVFSEPSESTGAITARDEVDPRISSMDPKYKDTIVVHAGESFKVD
ADYKPIPTIQWIKGDQELSNARLEIKSTDFATSLSVKDAVRVDSGNYILKAK
NVAGERSVTNVKVLDRPGPPEGPPVISGVTAEKCTLAWKPPLQDGGSDIINY
IVERRETSRLVWTVVDANVQTLSCVKLLEGNFYTRIMAVNKYGVGEPL
SEPVAKNPFVVPDAPKAPEVTTVTKDSMIVVWERPASDGGSEILGYVLEKRD
10 KEGIRWTRCHKRLIGELRLRVTLGIENHDYEFVRVSAENAAGLSEPPSPSAYQKA
CDPIYKPGPPNNPKVIDITRSSVFLSWSKPIYDGGCEIQGYIVEKCDVSVGEWT
MCTPPTGINKTNIEVEKLEKHEYNFRICAINKAGVGEHADVPGPPIVEEKLEA
PDIDLDELRLKIINIRAGGSLRLFVPIKGRPTPEVKWGVKVDGEIRDAIIVDTSS
FTSLVLDNVNRYDSGKYTLTLENSSGTKSAFVTVRVLDTPSPPVNLKVTEITKD
15 SVSITWEPPLLDGGSKIKNYIVEKREATRKSAAVVTNCHKNSWKIDQLQEGC
SYYFRVTAENEYGIGLPAQTADPIKVAEVPQPPGKITVDDVTRNSVLSWTKPE
HDGGSKIIQYIVEMQAKHSEKWSECARVKSQAVITNLTQGEYLFVRVAVNE
KGRSDPRSLAVPIVAKDLVIEPDVKPAFSSYSVQVQDLKIEVPISGRPKPTITW
TKDGLPLKQTTTRINVTDSLDTLTSIKETHKDDGGQYGITVANVVGQKTASIEI
20 VTLDKPDPPKGPVKFDDVSAESITLSWNPPLYTGGCQITNYIVQKRDTTTTVW
DVVSATVARTTLKVTKLKTGTEYQFRIFAENRYGQSFALES DPIVAQYPYKEPG
PPGTPFATAISKDSMVIQWHEPVNNGGSPVIGYHLERKERNLSILWTKVNKTIH
DTQFKAQNLEEGIEYEFVRVYAENIVGVGKASKNSECYVARDPCDPPGTPEPIM
VKRNEITLQWTKPVYDGGSMITGYIVEKRDLPDGRWMKASFTNVIETQFTVS
25 GLTEDQRYEFVRVIAKNAAGAISKPSDSTGPITAKDEVELPRISMDPKFRDTIVV
NAGETFRLEADVHGKPLPTIEWLRGDKEIEESARCEIKNTDFKALLIVKDAIRI
DGGQYILRASNVAGSKSFPVNVKVLDRPGPPEGPPVQVTGVTSEKCSLTWSPPL
QDGGSDISHYVVEKRETSRLAWTVVASEVVTNSLKVTKLLEGNFYFRIMAV
NKYGVGEPLESAPVLMKNPFVLPGPPKSLEVTNIAKDSMTVCWNRPSDGGG
30 EIIGYIVEKRDRSGIRWIKCNKRITDLRLRVTLGLTEDHEYEFVRVSAENAAGVG
EPSPATVYYKACDPVFKPGPPTNAHIVDTTKNSITLAWGKPIYDGGSEILGYVV
EICKADEEEWQIVTPQTGLRVTRFEISKLTEHQEYKIRVCALNKVGLGEATSVP
GTVKPEDKLEAPELDLDELRLKGI VVRAGGSARIHIPFKGRPTPEITWSREEGE
FTDKVQIEKGVNYTQLSIDNCDRNDAGKYILKLENSSGSKSAFVTVKVLDTPG
35 PPQNLAVKEVRKDSAFVLWEPPIIDGGAKVKNYVIDKRESTRKAYANVSSKCS
KTSFKVENLTEGAIYYFRVMAENEFVGVVPVETVDAVKAAEPPSPGKVT LTD
VSQTSASLMWEKPEHDGGSRVLGYVVEMQPKGTEKWSIVAESKVCNAVVTG
LSSGQYEQFRVKAYNEKGKSDPRVLGVPVIAKDLTIQPSLKLPFNTYSIQAGED
LKIEIPVIGRPRPNISWVKDGEPLKQTTTRVNVEETATSTVLHIKEGNKDDFGKY
40 TVTATNSAGTATENLSVIVLEKPGPPVGPVRFDEVSAFVVISWEPPAYTGGCQ
ISNYIVEKRDTTTTTWHMVSATVARTTIKITKLKTGTEYQFRIFAENRYGKSAP
LDSKAVIVQYPFKEPGPPGTPFVTSISKDQMLVQWHEPVNDGGTKIIGYHLEQ
KEKNSILWVKLNKTPIQDTKFKTGLDEGLEYEYFKVSAENIVGIGKPSKVSECF
VARDPCDPPGRPEAIVTRNNVTLKWKPAYDGGSKITGYIVEKKDLDPGRW
45 MKASFTNVLETEFTVSGLVEDQRYEFVRVIAARNAAGNFSEPSDSSGAITARDEID
APNASLDPKYKDVIVVHAGETVLEADIRGKPIPDVVWSKDGELEETAARM
EIKSTIQKTTLVVKDCIRTDGGQYILKLSNVGGTKSIPITVKVLDRPGPPEGPLK
VTGVTAEKCYLAWNPPPLQDGGANISHYIIEKRETSRLSWTQVSTEVQALNYK
VTKLLPGNEYIFRVMVAVNKYGIGEPLESGPVTACNPYKPPGPPSTPEVSAITKD
50 SMVVTWARPVDDGGTEIEGYILEKRDKEGVRWTKCNKKTLDLRLRVTLGLE

GHSYEFRAAENAAGVGEPSEPSVFYRACDALYPPGPPSNPKVTDTSRSSVSL
AWSKPIYDGGAPVKGYVVEVKEAAADEWTTCTPPTGLQGKQFTVTKLKENT
EYNFRICAINSEGVPATLPGSVVAQERIEPPEIELDADLRKVVLRLASATLRL
FVTIKGRPEPEVKWEKAEGILTDRAQIEVTSSFTMLVIDNVTRFDSGRYNLTLE
5 NNSGSKTAFVNVRLDSPSAPVNLTIREVKKDSVTLSEWEPPLIDGGAKITNYIV
EKRETRKAYATITNNCTKTTFRIENLQEGCSYYFRVLASNEYGIGLPAETTEP
VKVSEPPLPPGRVTLVDVTRNTATIKWEKPESDGGSKITGYVEMQTKGSEK
WSTCTQVKLTLEATISGLTAGEEYVFRVAAVNEKGRSDPRQLGVPVIARDIEIKP
SVELPFHTFNVKAREQLKIDVPFKGRPQATVNWRKDGQTLKETTRNVNSSSK
10 TVTSLSIKEASKEDVGTYELCVSNSAGSITVPITIIVLDRPGPPGPIRIDEVSCDSI
TISWNPPEYDGGCQISNYIVEKKETTSTTWHIVSQAVARTSIKIVRLTTGSEYQF
RVCAENRYGKSSYSESSAVVAEYFPSPGPPGTPKVVHATKSTMLVTWQVPVN
DGGSRVIGYHLEYKERSILWSKANKILIADTQMKVSGLDEGLMYEYRVYAE
NIAGIGKCSKSCEPVPARDPCDPPGQPEVTNITRKS SVSLKWSKPHYDGGAKIT
15 GYIVERRELDPGRWLKCNYTNIQETYFEVTELTEDQRYEFRVFARNAADSVSE
PSESTGPIIVKDDVEPPRVMMDVKFRDVIVVKAGEVLKINADIAGRPLPVISWA
KDGIEIEERARTEIISTDNHTLLTVKDCIRRDGTQYVLT LKNVAGTRSVAVNCK
VLDKPGPPAGPLEINGLTAEKCSLSWGRPQEDGGADIDYYIVEKRETSHLAWTI
CEGELQMTSCKVTKLLKGNEYIFRVTVGNKYGVGEPLESVAIKALDPFTVPSP
20 PTSLEITSVTKESMTLCWSRPESDGGSEISGYIIERREKNSLRWVRVNKKPVYD
LRVKSTGLREGCEYEYRVYAENAAGLSLPSETSPLIRAEDPVFLSPSPSKPKIVD
SGKTTITIAWVKPLFDGGAPITGYTVEYKKSDDTDWKTSIQSLRGTEYTISGLT
TGAEYVFRVKS VNKGASDPSDSSDPQIAKEREEEP LFDIDSEMRKTLIVKAG
ASFTMTVPFRGRPVPNVLWSKPD TDLRTRAYVDTTDSRTSLTIENANRNDSGK
25 YTLTIQNVLSAASLT LVVKVLDTPGPPTNITVQDVT KESAVLSWDVPENDGGA
PVKNYHIEKREASKKAWVSVTNNCNRLSYKVTNLQEGAIYYFRVSGENEFGV
GIPAETKEGVKITEKPSPEKLGVT SISKDSVSLTWLKPEHDGGSRIVHYVVEA
LEKGQKNWVKCAVAKSTHHVVSGLRENS EYFFRVFAENQAGLSDPRELLLPV
LIKEQLEPPEIDMKNFPSHTVYVRAGSNLKV DIPISGKPLPKVTL SRDGVPLKA
30 TMRFNTEITAENLTINLKESVTADAGRYEITAANSSGTTKAFINIVLDRPGPPT
GPVVISDITEESVTLKWEPPKYDGG SQVTNYILLKRETSTAVWTEVSATVART
MMKVMKLTTGEEYQFRIKAENRFGISDHIDSACVTVKLPYTTPGPPSTPWVTN
VTRESITVGWHEPVSNNGGSAVVG YHLEMKDRNSILWQKANKLVIRTT HFKVT
TISAGLIYEF RVYAENAAGVGKPSHPSEPV LAIDACEPPRNV RITDISKNSVSLS
35 WQQPAFDGGSKITGYIVERRDLPDGRWTKASFTNVTETQFIISGLTQNSQYEFR
VFARNAVGSISNPSEVVG PITCIDSYGGPVIDLPLEYTEVVKYRAGTSVKLRAG
ISGKPAPTIEWYKDDKELQTNALVCVENTTDLASILIKDADRLNSGCYELKLR
NAMGSASATIRVQILDKPGPPGGPIEFKTVTAEKITLLWRPPADDGGAKITHYIV
EKRETSRVVWSMVSEHLEECIITTTKIIKGNEYIFRVRAVNKYGIGEPLESDSVV
40 AKNAFVTPGPPGIPEVTKITKNSMTV VWSRPIADGGSDISGYFLEKRDKKS LG
WFKVLKETIRDTRQKVTGLTENS DYQYRVC AVNAAGQGPFSEPFYKAADPI
DPPGPPAKIRIADSTKSSITLG WSKPVYDGGSAVTGYVVEIRQGEETWTTVST
KGEVRTTEYVVS NLKPGVNY YFRVSAVNCAGQGEPIEMNEPVQAKDILEAPEI
DLDVALRTSVIAKAGEDVQVLIPFKGRPPPTVTWRKDEKNLGSDARYSIENDT
45 SSSLLTIPQVTRNDTGKYILTIENG VGEPKSSTVS VKVLDTPAACQKLQVKHVS
RGTVTLLWDPPLIDGGSPIINYVIEKR DATKRTWSV VSHKCSSTSFKLIDLSEKT
PFFFRVLAENEIGIGEPCETTEPVKAAEVPAPIRDL SMKDSTKTSVILSWTKPDF
DGGSVITEYVVERKGKGEQTWSHAGISKTC EIEVSQ LKEQSVLEFRVFAKNEK
GLSDPVTIGPITVKELIITPEVDLS DIPGAQVTVRIGHNVHLELPYK GKPKPSIS
50 WLKDGLPLKESEFVRFSKTENKITLSIKNAKKEHGGKYTVILDNAVCR IAVPIT

VITLGPPSKPKGPIRFDEIKADSVILSWDVPEDNNGGGEITCYSIEKRETSQTNWR
MVCSSVARTTFKVPNLVKDAEYQFRVRAENRYGVSQPLVSSIIVAKHQFRIPGP
PGKPVIIYNVTS DGM SLTWDAPVYDGGSEVTGFHVEKKERN SILWQKVNTSPI
SGREYRATGLVEGLDYQFRVYAENSAGLSSPSDPSKFTLAVSPVDPGPTPDYID
5 VTRETITLKWNPPLRDGGSKIVGYSIEKRQGNERNWVRCNFTDVSECQYTVTG
LSPGDRYEFRIIARNAVGTISPPSQSSGIIMTRDENVPPIVEFGPEYFDGLIISGE
SLRIKALVQGRPVPRVTWFKDGVIEIKRMNMEITDVLGSTSLFVRDATRDHRG
VYTVEAKNASGSAKAEIKVKVQDTPGKVVGPPIRFTNITGEKMTLWWDAPLN
DGCAPITHYIIEKRETSRLAWALIEDKCEAQS YTAIKLINGNEYQFRVSAVNKF
10 GVGRPLDSDPVVAQIQYTPDAPGIPEPSNITGNSITLTWARPESDGGSEIQQYI
LERREKKSTRWVKVISKRPISETRFKVTGLTEGNEYEFHVMAENAAGVG PASG
ISRLIKREPVNPPGPPTVVKVTDTSKTTVSLEWSKPVFDGGMEIIGYIEMCK
ADLGDWHKVNAAEACVKTRYTVTDLQAGEEYKFRVSAINGAGKGDSCEVTGT
IKAVDRLTAPELDIDANFKQTHVVRAGASIRLFIAYQGRPTPTAVWSKPDSNLS
15 LRADIHTTDSFSTLTVENCNRNDAGKYTLTVENNSGSKSITFTVKVLDTPGPPG
PITFKDVTRGSATLMWDAPLLDGGARIHHYVVEKREASRRSWQVISEKCTRQI
FKVNDLAEGVPYYFRVSAVNEYGVGEPYEMPEPIVATEQPAPPRRLDVVDTSK
SSAVLAWLKPDDHGGSRITGYLLEMQRQKGSDFWVEAGHTKQLTFTVERLVEK
TEYEFVRVKA KNDAGYSEPREAFSSVIIKEPQIEPTADLTGITNQLITCKAGSPFTI
20 DVPISGRPAKVTWKLEEMRLKETDRVSITTTKDRTTLTVKDSMRGDSGRYFL
TLENTAGVKTF SVTVVIGRPGPVTGPIEVSSVSAESCVLSWGEPKDGGGTEIT
NYIVEKRESGTTAWQLVNSSVKRTQIKVTHLTKYMEYSFRVSSENRFGVSKPL
ESAPIIAEHFPVPPSAPTRPEVYHVSANAMSIRWEEPYHDGGSKIIGYWVEKKE
RNTILWVKENKVPCLCNYKVTGLVEGLE YQFRTYALNAAGVSKASEASRPI
25 MAQNPVDAPGRPEVTDVTRSTVSLIWSAPAYDGGSKVVG YIIERKPVSEVGD
GRWLKCN YTI VSDNFFT V T ALSEGD TYEFRLAKNAAGVISKGSESTGPVTCR
DEYAPPKAELDARLHGD LVTIRAGSDLVLDAAVGGKPEPKI IWTKGDKELDL C
EKVSLQYTGKRATAVIKFCDRSDSGKYTLTVKNASGTKAVSVMVKVLDSGP
CGKLT VSRVTQEKCTLAWSLPQEDGGAETHYIVERRETSRLNWWVIVEGECPT
30 LSYVVTRLIKNNEYIFRVRAVNKYGPGVPVESEPIVARNSFTIPSPPGIPEE VGT
GKEHIIIQWTKPESDGGNEISNYLVDKREK KSLRWTRVN KDYVVYDTRLKVT
SLMEGCDYQFRVTAVNAAGNSEPSEASN FISCREPSYTPGPPSAPRVDTTKHS
ISLAWTKPMYDGGTDIVGYVLEMQEKD TDQWYRVHTNATIRNTEFTVPDLK
MGQKYSFRVA AVNVKGMSEYSESIAEIEPVERIEIPDLELADDLKKTVTIRAGA
35 SLRLMVS VSGRPPP VITWSKQ GIDLASRAIIDTTESY SLLIVDKVNRYDAGKYT
IEAENQSGKKSATVLVKVYDTPGPCPSVKVKEVSRDSVTITWEIPTIDGGAPVN
NYIVEKREAA MRAFKTVTTKCSKTLYRISGLVEGTMYYFRVLPENIYGIGEPCE
TSDAVLVSEVPLVPAKLEVVDVTKSTVTLAWEKPLYDGGSRLTGYVLEACKA
GTERWMKVVT LKPTVLEHTV TSLNEGEQYLFRIRAQNEKGVSEPRETVTAVT
40 VQDLRVLPTIDLSTMPQKTIHVPAGRPVELVIPIAGRPPPAASWFFAGSKLRESE
RVTVETHTKVAKLTIRETTIRDTGEYTLLEKNVTGTTSETIKVIILDKPGPPTGPI
KIDEIDATSITISWEPPELDGGAPLSGYVVEQRDAHRPGWLPVSESVTRSTFKF
TRLTEGNEYVFRVAATNRFGIGSYLQSEVIECRSSIRIPGPPE TLQIFDVSRDGMT
LTWYPPEDDGGSQVTGYIVERKEVRADRWVRVNKVPVTMTRYRSTGLTEGL
45 EYEHRVTAINARGSGKPSRPSKPIVAMDPIAPPKQPQNPRVTD TTRTSVSLAWS
VPEDEGGSKVTGYLIEMQKVDQHEWTKCNTTPTKIREYTLTHLPQGA EYRFR
VLACNAGGPGEPAEVP GTVKVTEMLEYPDYELDERYQEGIFVRQGGVIRLTPII
KGKFPICKWTKEGQDISKRAMIATSETHTELVIKEADRGD SGTYDLVLENKC
GKKAVYIKVRVIGSPNSPEGPLEYDDIQVRSVRVSWRPPADDGGADILGYILER
50 REVPKAAWYTIDSRVRGTSLVVKGLKENVEYHFRVSAENQFGISKPLKSEEPV

TPKTPLNPPEPPSNPPEVLDVTKSSVLSWSRPKDDGGSRVGTGYIERKETSTD
KWVRHNKTQITTTMYTVTGLVPDAEYQFRIIAQNDVGLSETSPASEPVVCKDP
FDKPSQPGELEILSISKDSVTLQWEKPECDGGKEILGYWVEYRQSGDSAWKKS
NKERIKDKQFTIGGLLEATEYEFVRFAENETGLSRPRRTAMSIKTKLTSGEAPGI
5 RKEMKDVTTKLGEAAQLSCQIVGRPLPDIKWYRFGKELIQSRKYKMSSDGRT
HTLTVMTEEQEDEGVYTCIATNEVGEVETSSKLLLQATPQFHPGYPLKEKYYG
AVGSTLRLHVMYIGRPVPAMTWFHGQKLLQNSENITIENTEHYTHLVMKNVQ
RKTHAGKYKVQLSNVFGTVDAILDVEIQDKPDKPTGPVIEALLKNSAVISWK
PPADDGGSWITNYVVEKCEAKEGAEWQLVSSAISVTTCRIVNLTENAGYYFRV
10 SAQNTFGISDPLEVSSVVIKSPFEKPGAPGKPTITAVTKDSCVVAWKPPASDGG
AKIRNYYLEKREKKQNKWISVTTEEIRETVFSVKNLIEGLEYEFRVKCENLGG
ESEWSEISEPITPKSDVPIQAPHFKEELRNLNVRYSNATLVCKVTGHPKPIVK
WYRQGKEIADGLKYRIQEFKGGYHQLIIASVTDDDATVYQVRATNQGGSVS
GTASLEVEVPAKIHLPKTLEGMGAVHALRGEVVSIIKIPFSGKPDPVITWQKGQ
15 DLIDNNGHYQVIVTRSFTSLVFPNGVERKDAGFYVVCANRFGIDQKTVELDV
ADVDPGRGVKVS DSVSRDSVNLTWTEPASDGGSKITNYIVEKCATTAEWLVRV
GQARETRYTVINLFGKTSYQFRVIAENKFGLSKPSEPSEPTITKEDKTRAMNYD
EEVDETREVSMTKASHSSTKELYEKYMAIEDLGRGEFGIVHRCVETSSKITY
MAKFVKVKGTDQVLVKKESILNIARHRNHLHESFESMEELVMIFEFISGLDI
20 FERINTSAFELNEREIVSYVHQVCEALQFLHSHNIGHFDIRPENIYQTRRSSTIK
IIEFGQARQLKPGDNFRLFTAPEYYAPEVHQHDVVSTATDMWSLGLTVYVLL
SGINPFLAETNQQIENIMNAEYTFDEEAFKEISIEAMDFVDRLLVKERKSMT
ASEALQHPWLKQKIERVSTKVIRTLKHRRYYHTLIKKDLNMVVSAAARISCGG
AIRSQKGVSVAKVKVASIEIGPVSGQIMHAVGEEGGHVKYVCKIENYDQSTQV
25 TWYFGVRQLENSEKYEITYEDGVAILYVKDITKLDDGTYRCKVVNDYGEDSS
YAEFVKGVREVDYCRRTMKKIKRRTDTMRLLERPPEFTLPLYNKTA YVG
ENVRFVGTITVHPEPHVTWYKSGQKIKPGDNDKKYTFESDKGLYQLTINSVTT
DDDAEYTVVARNKYGEDSCKAKLTVTLHPPPTDSTLRPMFKRLLANAECQEG
QSVCFEIRVSGIPPPTLKWEKDGQPLSLGPNIEIIHEGLDYALHIRDTLPEDTG
30 YYRVATNTAGSTSCQAHQLQVERLRYKKQEFKSKEEHERHVQKQIDKTLRMA
EILSGTESVPLTQVAKEALREAAVLYKPAVSTKTVKGEFRLEIEEKKEERKLRM
PYDVPEPRKYKQTTIEEDQRIKQFVPMSDMKWYKKIRDQYEMPGKLDREVQ
KRPKRIRLSRWEQFYVMPLPRITDQYRPKWRIPKLSQDDLEIVRPARRRTPSPD
YDFYYRPRRRSLGDISDEELLLPIDDYLAMKRTEEERLRLEEELELGFSA SPPS
35 RSPPHFELSSLRYSSPQAHVKVEETRKDFRYSTYHIPTKAEASTSYAELRERHA
QAAYRQPKQRQRIMAEREDEELLRPVTTTQHLSEYKSELDFMSKEEKSRRKKS
RRQREVTEITEIEEYEISKHAQRESSSSASRLLRRRRSLSPTYIELMRPVSELIR
SRPQPAEEYEDDTERRSPTPERTRPRSPSPVSSERSLSRFERSARFDIFSRYESMK
AALKTQKTSEKYEVLSSQPFTLDHAPRITLRMRSHRVPCGQNTRFILNVQSK
40 PTAEVK WYHNGVELQESSKIHYTNTSGVLTLEILDCHTDDSGTYRAVCTNYK
GEASDYATLDVTGGDYTTYASQRRDEEVPRSVFPELTRTEAYAVSSFKKTSEM
EASSSVREVKSQMTETRESLSSYEHSASAEMKSAALEEKSLEEKSTTRKIKTTL
AARILTKPRSMTVYEGESARFSCD TDGEPVPTVTWLRKGQVLSTSARHQVTT
TKYKSTFEISSVQASDEGNYSVVVENSEGKQAEFTLTIQKARVTEKAVTSPPR
45 VKSPEPRVKSPEAVKSPKRVKSPEPSHPKAVSPTETKPTPTKQVQHLVPSAPPKI
TQFLKAEASKEIAKLTCVVESSVLRAKEVTWYKDGKKLKENGHFQFHYSAD
GTYELKINNLTESDQGEYVCEISGEGGTSKTNLQFMGQAFKSIHEKVSKISETK
KSDQKTTESTVTRKTEPKAPEPISSKPVIVTGLQD TT VSSDSVAKFAVKATGEP
RPTAIWTKDGKAITQGGKYKLSEDKGGFFLEIHKTDTS DSGLYTCTVKNSAGS
50 VSSSCKLTIAIKDTEAQKVSTQKTSEITPQKKAVVQEEISQKALRSEEIKMSEA

KSQEK LALKEEASKVLISEEVK KSAATSLEKSIVHEEITKTSQASEEVRTHAEIK
AFSTQMSINEGQRLVLKANIAGATDVK WVLNGVELTNSEEYRYGVSGSDQTL
TIKQASHRDEGILTCISK TKEGIVKCQYDLT LSKELSDAPAFISQPRSQNINEGQ
NVLFTCEISGEPSPEIEWFKNNLPISISSNV SISRSRNVYSLEIRNASVSDSGKYTI
5 KAKNFRGQCSATASLMVLPLVEEPSREVVLRTSGDTS LQGSFSSQSVQMSASK
QEASFSSFSSSSASSMTEMKFASMSAQSMSSMQESFVEMSSSSFMGISNMTQL
ESSTSKMLKAGIRGIPPKIEALPSDISIDEGK VLTVACAFTGEPTPEVTWSCGGR
KIHSQEQGRFHIENTDDLTTLIIMDVQKQDGGLYTL SLGNEFGSDSATVNIHRS
I
10 -COOH

Figure 53- Full-length Amino Acid Sequence (TTN) (SEQ ID NO: 110)

15

5'-GCTGCTGTGCTTGGAGAAGCAGATGATGGGAATCTGGACTTGGACATGA
AGAGTGGCCTAGAAAACACTGCTGCCTTAGATAATCAGCCAAAGGGCGCTT
TGAAGAAGCTGATTTATGCAGCTAAGTTAAATGCTTCTTTAAAAGCCTTGG
AAGGAGAACGAAATCAAGTTTACACTCAGTTATCTGAAGTGGATCAAGTAA
5 AAGAAGACCTTACAGAGCATATCAAAAGTCTTGAGTCTAAACAAGCATCTT
TGCAGTCAGAAAAGACAGAGTTTGAAAGTGAGAGCCAGAACTTCAGCA
GAAACTGAAAGTGATAACCGAGCTGTACCAAGAAAATGAAATGAAACTTC
ACAGGAAATTAACAGTAGAAGAAAATTACCGATTAGAGAAAGAAGAAAAA
CTTTCCAAAGTAGATGAGAAAATCAGCCATGCGACCGAGGAGCTGGAGAC
10 CTGCAGGCAGCGTGCCAAGGATCTTGAAGAAGAG-3'

Figure 54- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 57 (SEQ ID NO: 111) (486 nucleotides in total)

5'-GGAATCATGCATCGGACTACACGGATCAAAATCACAGAGCTGAACCCCC
ACCTCATGTGTGCCCTCTGCGGGGGGTACTTCATCGACGCCACCACTATCGT
GGAGTGCCTGCATTCTTCTGCAAAACCTGCATCGTGCGCTACCTGGAGAC
CAACAAATACTGCCCCATGTGTGACGTGCAGGTCCATAAAACCCGGCCGCT
5 GCTGAGCATCAGGTCTGACAAAACACTTCAAGACATTGTCTACAAATTGGT
CCCTGGGCTTTTTAAAGATGAGATGAAACGGCGGCGGGATTCTATGCAGC
GTACCCCTGACGGAGGTCCCCAACGGCTCCAATGAGGACCGCGGCGAGG
TCTTGAGCAGGAGAAGGGGGCTCTGAGTGATGATGAGATTGTCAGCCTCT
CCATCGAATTCTACGAAGGTGCCGGGGACCGGGACGAGAAGAAGGGCCCC
10 CTGGAGAATGGGGATGGGGACAAAGAGAAAACAGGGGTGCGCTTCCTGC
GATGCCCAGCAGCCATGACCGTCATGCATCTTGCCAAGTTTCTCCGCAACA
AGATGGATGTGCCCAGCAAGTACAAGGTGGAGGTTCTGTACGAGGACGAG
CCACTGAAGGAATACTACACCCTCATGGACATCGCCTACATCTACCCCTGGC
GGCGGAACGGGCCTCTCCCCCTCAAGTACCGTGTCCAGCCAGCCTGCAAG
15 CGGCTCACCCTAGCCACGGTGCCCAACCCCTCCGAGGGCACCAACACCAG
CGGGGCGTCCGAGTCCAGTGGGGCCACCACAGCTGCCAACGGGGGTAGCT
TGAAGTGCCTGCAGACACCATCCTCCACCAGCAGGGGGCGCAAGATGACT
GTCAACGGCGCTCCCGTGCCCCCTTAAGTTGA-3'

20 Figure 55- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 65 (SEQ ID NO: 112) (891 nucleotides in total)

5'-AGTCCGTACAGTCCCCGGGGCGGCTCCAATGTCATCCAGTGCTACCGCT
GCGGAGACACCTGCAAAGGGGAGGTGGTCCGTGTCCACAACAACCACTTC
CACATCCGATGCTTCACTTGTCAAGTATGTGGATGTGGCCTGGCCCAGTCG
GGCTTCTTCTTCAAGAACCAGGAGTACATCTGCGCCCAGGACTACCAACAG
5 CTTTATGGCACCCGCTGTGATAGCTGCCGGGACTTCATCACGGGTGAGGTC
ATCTCTGCCCTGGGCCGTACCTACCGCCCTAAATGCTTCGTATGCAGCTTGT
GCAGGAAGCCTTTCCCTATTGGAGATAAGGTGACCTTCAGTGGGAAAGAAT
GTGTATGTCAGACGTGCTCCCAGTCAATGACCAGCAGCAAGCCGATCAAGA
TCCGTGGACCAAGCCACTGTGCTGGGTGCAAAGAGGAGATTAAACATGGC
10 CAGTCACTTCTGGCACTGGACAAGCAGTGGCACGTCAGCTGTTTCAAATGC
CAGACCTGTAGCGTCATCCTCACTGGGGAATACATTAGCAAAGACGGTGTT
CCATACTGCGAGTCTGACTACCACTCCCAGTTTGGCATCAAATGTGAGACT
TGTGACCGGTACATCAGTGGCAGGGTCTTGGAGGCAGGAGGGAAACACTA
CCACCCTACCTGTGCCAGATGTGTACGCTGCCACCAGATGTTCAGTGAGGG
15 GGAGGAGATGTATCTCACAGGTTCTGAGGTTTGGCACCCAATCTGCAAGCA
GGCAGCCAGGGCAGAGAAGAAG-3'

Figure 56- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 75 (SEQ ID NO: 113) (783 nucleotides in total)

5'-GCAACATCAGGTGACTGTCCCAGAAGTGAATCGCAGGGAGAAGAGCCT
GCTGAGTGCAGTGAGGCGGGTCTCCTGCAGGAGGGAGTACAGCCAGAGG
AGTTTGTGGCCATCGCGGACTACGCTGCCACCGATGAGACCCAGCTCAGTT
TTTTGAGAGGAGAAAAAATTCTTATCCTGAGACAAACCACTGCAGATTGGT
5 GGTGGGGTGAGCGTGCGGGCTGCTGTGGGTACATTCGGGCAAACCTATGTGG
GGAAGCACGTGGATGAGTACGACCCCGAGGACACGTGGCAGGATGAAGA
GTACTTCGGCAGCTATGGAACCTCTGAAACTCCACTTGGAGATGTTGGCAGA
CCAGCCACGAACAATAAATACCACAGTGTCATCCTGCAGAATAAAGAATC
CCTGACGGATAAAGTCATCCTGGACGTGGGCTGTGGGACTGGGATCATCAG
10 TCTCTTCTGTGCACACTATGCGCGGCCTAGAGCGGTGTACGCGGTGGAGGC
CAGTGAGATGGCACAGCACACGGGGCAGCTGGTCCTGCAGAACGGCTTTG
CTGACATCATCACCGTGTACCAGCAGAAGGTGGAGGATGTGGTGCTGCCCCG
AGAAGGTGGACGTGCTGGTGTCTGAGTGGATGGGGACCTGCCTGCTGAAG
CAGCAAAGTTCTGAGGGAGACGCAAGTAAAGATACCACAGGTGTCCTAGA
15 TTGTCAACAGACCATTAA-3'

Figure 57- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 82 (SEQ ID NO: 114) (723 nucleotides in total)

NH₂-MTSPEGAQNKEIDCLSPEAQRLAEARLAAKRAARAEAREIRMKELERQQ
KEIYQVQKKYYGLDTKWGDIEQWMEDSERYSRFRNTSASDEDERLSVGS
RGSRLRTNGYDGDYCGSQSLSRSGRGLSCSNLGLPSSGLASKPLSTQNGSRAS
MLDESSLYGARRGSACGSRAPSEYGSHLNSSSRASSRASSARASPVVEERPDK
5 DFAEKGSRNMPSLSAATLASLGGTSSRRGSGDTSISMDTEASIREIKELNELKD
QIQDVEGKYMQGLKEMKDSLAEVEEKYKKAMVSNAQLDNEKTNFMYQVD
TLKDMLELEEQLAESQRQYEEKNEFEREKHAHSILQFQFAEVKEALRQREE
MLEEIRQLQOKQAGFIREISDLQETIEWKDKKIGALERQKEFFDSIRSERDDL
EETVKLKEELKKHGIILNSEIATNGETSDTVNDVGYQAPTKITKEELNALKSAG
10 EGTLDVRLKKLIDERECLLEQIKKLKGQLEGRQKNNKDLLRAEDGILENGTD
AHVMDLQRDANRQISDLKFKLAKSEQEITALEQNVIRLESQVTRYRSAENAE
KIEDELKAEKRKLQRELRSALDKTEELEVSNGHLVKRLEKMKANRSALLSQ
-COOH

15 Figure 58- Full-length Amino Acid Sequence (mLRRFIP1) (SEQ ID NO: 139)

NH₂-MTSSMASYEQLVRQVEALKAENTHLRQELRDNSSHLSKLETETSGMKE
VLKHLQGGKLEQEARVLVSSGQTEVLEQLKALQTDISSLYNLKFHAPALGPEPA
ARTPEGSPVHGSGPSKDSFGELSRATIRLLEELDQERCFLLEIEKEEKEKLWY
YSQLQGLSKRLDELPHVDTFMQMDLIRQQLEFEAQHIRSLMEERFGTSD
5 VQRAQIRASRLQIDKELLEAQDRVQQTPEQALLAVKPVAVEEEQEA
EDGTPQPGNSKVEVFWLLSMLATRDQEDTARTLLAMSSSPESC
VAMRRSGCLPLLLQILHGTEAGSVGRAGIPGAPGAKDARMRANAALHNIVFSQPDQGLAR
KEMRVLHVLEQIRAYCETCWDWLQARDSGTETPVPIEPQICQATCAVMKLSF
DEEYRRAMNELGGLQAVAELLQVDYEMHKMTRDPLNLALRRYAGMTLTNLT
10 FGDVANKATLCARRGCMEDIAVQLGSESEELHQVVSSILRNLSWRADINSK
KVLRVGSMTALMECVLRASKESTLKSVLNLSAHSTENKAAICQVDGALG
FLVSTLTYRCQGNLAVIESGGGILRNVSLSIATREDYRQVLRDHNC
LQTLTLLQHLTSHSLTIVSNACGTLWNLSARS
PRDQELLWDLGAVGMLRNLVHSHKHKMIAM
GSAAALRNLLAHRPAKYQAAAMAVSPGTCVPSLYVRKQRALEAELDTRH
15 LVHALGHLEKQSLPEAETTSKKPLPLRHLDDLGLVQDYASDSGCFD
DDDDAPSLAAATTAEPASPAVMSMFLGGPFLQGQALARTPPARQGG
LEAEKEAGGEAAVAAKAKAKLALAVARIDRLVEDISALHTSSD
DFSLSGDPGQEAPREGRAQSCSPCRGTEGGRREAGSRAHPLRLK
AAHTSLSNDSLNSGSTSDGYCTREHMTPCPLAALAEHRDDPVRGQ
TRPRRLDLPLSRAELPARDTAATDARVRTIKLSPTYQH
20 VPLLDGAAGAGVRPLVGPSTPGARKQAWIPADSLSKVPEKLVASPL
PIASKVLQKLVAQDGPMSSLRCSLSSSTGHAVPSQAENLSDSSLE
GLEEAGPGEAELGRAWRASGSTSLPVSIAPQGRSRGLGVEDATPSS
SSSENCVQETPLVLSRCSVSSSLGSFESRSIASSIPSDPCSGLGSGT
VSPSELPDSPGQTMPPSRSKTPPAPPGQPETSQFSLQWESYVKRFL
DIADCRERCQPPSELDAGSVRFTVEKPDENFSCA
25 SLSALALHELYVQQDVELRLRPACPERAVGGGGHRRRDEAASRLD
GPAPAGSRARSATDKELEALRECLGAAMPARLRKVASALVPGRSLP
VPVYMLVPAPARGDDSGTDSAEGTPVNFSSAASLSDET
LQGPSRDKPAGPGDRQKPTGRAAPARQTRSHRPAAGAGKSTEHT
RGPCNRAGLELPLSRPQSARSNRDSSCQTRTRGDGALQSLCLTTP
TEEAVYCFYDSDEEPPATAPPPRRASAIPRALKREKPAGRKE
30 TPSRAAQPATLPVRAQPRLIVDETPPCYSLTSSASSLSEPEAPEQ
PANHARGPEQGSKQDSSPSRAEEELLQRCISLAMPRRRTQVPGS
RRRKPRALRSDIRPTEITQKCQEEVAGSDPASDLDSVEWQAIQEG
ANSIVTWLHQAAAKASLEASSEDSSLSLVSGVSAGSTLQPSKLRK
GRKPAAEAGGAWRPEKRGTTSTKINGSPRLPNGPEKAKGTQKMMAG
ESTMLRGRTVIYSAGPASRTQSKGISGPCTTPKKTGTSGTT
35 QPETVTKAPSPEQQRSRSLHRPGKISELAALRHPPRSATPPARLAK
TPSSSSSQTSPASQPLPRRSPLATPTGGPLPGPGGSLVPKSPARALL
AKQHKTQKSPVRIPFMQRPARRVPPPLARPSPEPGSRGRAGAEGT
PGARGSRLGLVRMASARSSGSESSDRSGFRRQLTFIKESPGLLRR
RRSELSSADSTASTSQAASPRRGRPALPAVFLCSRCDELRVSPRQPL
AAQRSPQAKPGLAPLAPRRTSSESPSRLPVRA
SPGRPETV40 KRYASLPHISVSRRSDSAVSVPTTQANATRRGSDGEARPL
PRVAPPGTTWRRIKDEDVPHILRSTLPATALPLRVSSPEDSPAGT
PQRKTSDAVVQTEDVATSKTNSSTSPSLESRDPPQAPASGPVAPQGS
DVDGPVLT
KPPASAPFPHEGLSAVIAGFPTSRHGSPSRAARVPPFNYVPSPMAA
ATMASDSAVEKAPVSSPASLLE-COOH

Figure 59- Full-length Amino Acid Sequence (mAPC2) (SEQ ID NO: 140)

NH₂-MQKPSGLKPPGRGGKHSSPVGRPSVGSASSSVVASTSGSKEGSPLHKQAS
 GPSSSGAAATVSEKPGPKAAEVGDDFLGHFVVGERVWVNGVKPGVVQYLGE
 TQFAPGQWAGVVLDDPVGKNDGAVGAVRYFECPALQGIFTRPSKLTRQPTAE
 GSGSDTHSVESLTAQNLSLHSGTATPPLTGRVIPLRESVLNSSVKTGNESGSNLS
 5 DSGSVKRGDKDLHLGDRVLVGGTKTGVVRYVGETDFAKGEWCGVELDEPLG
 KNDGAVAGTRYFQCPPKFGLFAPIHKVIRIGFPSTSPAKAKKTKRMAMGVSA
 THSPSSSSISSVSSVASSVGGPASRSGLLTETSSRYARKISGTIALQEALKEKQQH
 IEQLLAERDLERAEVAKATSHICEVEKEIALLKAQHEQYVAEAEKLQRARLL
 VENVRKEKVDLSNQLEEERRKVEDLQFRVEEESITKGDLETQTQLEHARIGEL
 10 EQSLLLEKAQAERLLRELADNRLTTVAEKSRVLQLEEELSLRRGEIEELQHCLL
 QSGPPPADHPEAAETLRLRERLLSASKEHQDDSTLLQDKYEHMLKTYQTEVD
 KLRAANEKYAQEVADLKAKVQQATTENMGLMDNWKSKLDSLSDHQKSLE
 DLKATLNSGPGAQQKEIGELKALVEGIKMEHQLELGNLQAKHDLETAMHGKE
 KEGLRQKLQEVQEELAGLQQHWREQLQEQASQHRLELQEAQDQCRDAQLRV
 15 QELEGLDVEYRGQAQAIEFLKEQISLAEEKMLDYEMLQRAEAQSRQEAERLR
 EKLLVAENRLQAAESLCSAQHSHVIESSDLSEETIRMKETVEGLQDKLNKRDK
 EVTALTSQMDMLRAQVSVLENKCKSGEKKIDSLLKEKRRLEAELEAVSRKTH
 DASGQLVHISQELLRKERSLNELRVLLLEANRHSPGPERDLSREVHKAEWRIK
 EQKLKDDIRGLREKLTGLDKEKSLSEQRRLSLIDPASPELLKLQHQLVSTEDA
 20 LRDALNQAQQVERLVEALRGCSDRQTISNSGSANGIHQPDKAHKQEDKH
 -COOH

Figure 60- Full-length Amino Acid Sequence (mCYLN2(1047)) (SEQ ID NO: 141)

NH₂-MMMVMQPEGLGAGEGPFSGGGGGEYMEQEEDWDRDLLLDPWEKQQ
RKTFTAWCNSHLRKAGTQIENIEEDFRNGLKMLLLEVISGERLPRPDKGKMR
FHKIANVNKALDFIASKGVKLVSIGAEIVDGNLKM TLGMIWTIILRF AIQDISV
EETSAKEGLLLWCQRKTAPYRNVNVQNFHTSWKDGLALCALIHRHRPDLIDY
5 AKLRKDDPIGNLNTAFEVAEKYLDIPKMLDAEDIVNTPKPDEKAIMTYVSCFY
HAFAGAEQAETAANRICKVLAVNQENEKLMEEYEKLASELLEWIRRTVPWLE
NRVGEPMSMSAMQRKLEDFRDYRRLHKPPRVQEK CQLEINFNTLQTKLRLSHR
PAFMPSEGKLVSDIANAWRGLEQVEKGYEDWLLSEIRRLQRLQHLAEKFQQK
ASLHEAWTRGKEEMLNQHDYESASLQEV RALLRRHEAFESDLAAHQDRVEHI
10 AALAQELNELDYHEAASVNSRCQAICDQWDNLGTLTQKRRDALERMEKLLE
TIDQLQLEFARRAAPFNWLDGAIEDLQDVWLVHSVEETQSLLTAHEQFKATL
PEADRERGAILGIQGEIQKICQTYGLRPKSGNPYITLSSQDINNKWDTVRKLVP
SRDQTLQEELARQQVNERLRRQFAAQANAIGPWIQ GKVEEVGRLAAGLAGSL
EEQMAGLRQQEQNIINYKSNIDRLEGDHQLLQESLVFDNKHTVYSMEHIRVG
15 WEQLLTSIARTINEVENQVLTRDAKGLS QEQLNEFRASFNHFDRKRNGMMEP
DDFRACLISMGYDLGEVEFARIMTMVDPNAAGVVTFQAFIDFMTRETAETDT
AEQVVASF KILAGDKNYITPEELRRELPAEQAEYCIRRM APYKGS GAPSGALD
YVAFSSALYGESDL
-COOH
20

Figure 61- Full-length Amino Acid Sequence (mACTN3) (SEQ ID NO: 142)

NH₂-MLETLRERLLSVQQDFTSGLKTLSDKSREAKVKGKPRTAPRLPKYSAGL
ELLSRYEDAWAALHRRRAKECADAGELVDSEVVMLSAHWEKKRTSLNELQGGQ
LQQLPALLQDLESLMASLAHLETSFEEVENHLLHLEDLCGQCELERHKQAQA
QHLESYKKSKRKELEAFKAELDTHTQKALEMEHTQQLKKERQKFFEEAFQ
5 QDMEQYLSTGYLQIAERREPMGSMSSMEVNVDVLEQMDLMDISDQEALDVF
LNSGGEDNIVMSPGVEMESNPNQNEMSLQIPSPSESASQPPASPSACTDLDTAD
APLIQSDEEEVQVDTALVTLHTDRKSTPGVSDDSDQCDSTQDI
-COOH

10 Figure 62- Full-length Amino Acid Sequence (mDTNBP1) (SEQ ID NO: 143)

NH₂-EKGIKLLQAQKLVQYLRECEDVMDWINDKEAIVTSEELGQDLEHVEVLQ
KKFEEFQTDLAAHEERVNEVSQFAAKLIQEQHPHEELIKTKQDEVNAAWQRL
KGLALQRQGKLFGAAEVQRFNRDVDETIGWIKKEQLMASDDFGRDLASVQ
ALLRKHEGLERDLAALEDKVKALCAEADRLQQSHPLSASQIQGKR
5 -COOH

Figure 63- Partial Amino Acid Sequence (mTAKEDA013) (SEQ ID NO: 123)

NH₂-MVDREQLVQKARLAEQAERYDDMAAAMKNVTELNEPLSNEERNLLSV
AYKNVVGARRSSWRVISSIEQKTSADGNEKKIEMVRAYREKIEKELEAVCQDV
LSLLDNYLIKNCSETQYESKV FYLKMKG DYRYLA EVATGEKRATVVESFEK
5 AYSEAHEISKEHMQPTHPIRLGLALNYSVFY YEIQNAPEQACHLAKTAFDDAI
AELDTLNEDSYKDSTLIMQLLRDNLT LWTS DQQDDDG GEGNN
-COOH

Figure 64- Full-length Amino Acid Sequence (m14-3-3g) (SEQ ID NO: 144)

NH₂-MDKNELVQKAKLAEQAERYDDMAACMKSVTEQGAELSNEERNLLSVA
YKNVVGARRSSWRVSSIEQKTEGAEEKQQMAREYREKIETELRDICNDVLS
LLEKFLIPNASQPESKVFYLMKGDYYRYLAEVAAGDDKKGIVDQSQQAYQE
5 AFEISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAELDTL
SEESYKDSTLIMQLLRDNLTLWTSDTQGDEAEAGEGGEN
-COOH

Figure 65- Full-length Amino Acid Sequence (m14-3-3zeta) (SEQ ID NO: 145)

NH₂-MDKNELVQKAKLAEQAERYDDMAACMKSVTEQGAELSNEERNLLSVA
YKNVVGARRSSWRVSSIEQKTEGAEEKQQMAREYREKIETELRDICNDVLS
LLEKFLIPNASQAESKVFYLMKMGDYYRYLA EVAAGDDKKGIVDQSQQAYQE
5 AFEISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAELDTL
SEESYKDSTLIMQLLRDNLTLWTSDTQGDEAEAGEGGEN
-COOH

Figure 66- Full-length Amino Acid Sequence (14-3-3zeta) (SEQ ID NO: 146)

NH₂-MTMDKSELVQKAKLAEQAERYDDMAAAMKAVTEQGHELSNEERNLLS
VAYKNVVGARRSSWRVISSIEQKTERNEKKQQMGKEYREKIEAELQDICNDV
LELLDKYLILNATQAESKV FYLKMKG DYFRYLSEVASGENKQTTVSNSQQAY
5 QEAFEISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAEL
DTLNEESYKDSTLIMQLLRDNLTLWTSENQGDEGDAGEGEN
-COOH

Figure 67- Full-length Amino Acid Sequence (m14-3-3b) (SEQ ID NO: 147)

NH₂-MEKTELIQKAKLAEQAERYDDMATCMKAVTEQGAELSNEERNLLSVAY
KNVVGGRRSAWRVISSIEQKTDTSKKLQLIKDYREKVESELRSICTTVLELLD
KYLIANATNPESKVFYLMKGDYFRYLAEVACGDDRKQTIENSQGAYQEAFD
5 ISKKEMQPTHPIRLGLALNFSVFYYEILNNPELACTLAKTAFDEAIAELDTLNE
-COOH

Figure 68- Full-length Amino Acid Sequence (m14-3-3theta) (SEQ ID NO: 148)

NH₂-MEKTELIQKAKLAEQAERYDDMATCMKAVTEQGAELSNEERNLLSVAY
KNVVGGRRSAWRVISSIEQKTDTSKKLQLIKDYREKVESELRSICTTVLELLD
KYLIANATNPESKVFYLMKGDYFRYLAEVACGDDRKQTIDNSQGAYQEAFD
ISKKEMQPTHPIRLGLALNFSVFYYEILNNPELACTLAKTAFDEAIAELDTLNE
5 DSYKDSTLIMQLLRDNLTLWTSDSAGEECDAAEGAEN
-COOH

Figure 69- Full-length Amino Acid Sequence (14-3-3theta) (SEQ ID NO: 149)

NH₂-MELQRTSSVSGPLSPAYTGQVPYNYNQLEGRFKQLQDEREAVQKKTTFTK
 WVNSHLARVSCRITDLYTDLRDGRMLIKLLEVLSSGERLPKPTKGRMRIHCLEN
 VDKALQFLKEQRVHLENMGSHDIVDGNHRLTLGLIWTIILRFQIQDISVETEDN
 KEKKSAKDALLLWCQMKTAGYPNVNIHNFTTSWRDGMFNAIHKHRPDLI
 5 DFDKLLKKSNAHYNLQNAFNLAEQHLGLTKLLDPEDISVDHPDEKSIITYVVTY
 YHYFSKMKALAVEGKRIGKVLDNAIETEKMIKEYETLASDLLEWIEQTHILNN
 RKFANSLVGVQQQLQAFNTYRTVEKPPKFTEKGNLEVLLFAIQSKMRANNQK
 VYMPREGKLISDINKAWERLEKAEHERELALRNELIRQEKLEQLARRFDRKA
 AMRETWLSNQRLVSQDNFGFDLPVEAATKKHEAIETDIAAYEERVQAVVAV
 10 ARELEAENYHDIKRITARKDNVIRLWEYLLELLRARRQRLEMNLGLQKIFQEM
 LYIMDWMDEMKVLLLSQDYGKHLGLVEDLLQKHALVEADIAIQAERVGRVN
 ASAQKFATDGEYKPCDPQVIRDRVAHMEFCYQELCQLAAERRARLEESRRL
 WKFFWEMAEEEGWIREKEKILSSDDYGKDLTSVMRLLSKHRAFEDEMSGRS
 GHFEQAIKEGEDMIAEEHFGSEKIRERIIYIREQWANLEQLSAIRKKRLEEASLL
 15 HQFQADADDIDAWMLDILKIVSSNDVGHDEYSTQSLVKKHKDVAEEITNCRP
 TIDTLHEQASALPQAHAESPDVKGRLAGIEERCKEMAELTRLRKQALQDTLAL
 YKMFSEADACELWIDEKEQWLNNMQIPEKLEDLEVIQHRFESLEPEMNNQAS
 RVAVVNQIARQLMHNGHPSEKEIRAQQDKLNTRWSQFRELVDKRDALLSAL
 SIQNYHLECNETKSCIREKTKVIESTQDLGNDLAGVMALQCKLTGMERDLVAI
 20 EAKLSDLQKEAEKLESEHPDQAQAILSRLAEISDVWEEMKTTLKNREASLGE
 ASKLQQFLRDLDLDFQSWLSRTQTAIASEDMPNTLTEAEKLLTQHENIKNEIDN
 YEEDYQKMRDMGEMVTQGQTDAAQYMFLRQRLQALDTGWNELHKMWENR
 QNLLSQSHAYQQFLRDTKQAEAFNNQEYVLAHTEMPPTLEGAEAAIKKQED
 FMTTMDANEEKINAVVETGRRLVSDGNINSRIQEKVDSIDDRHRKNREAASE
 25 LLMRLKDNRDQLQFLQDCQELSLWINEKMLTAQDMSYDEARNLHSHKWLKH
 QAFMAELASNKEWLDKIEKEGMQLISEKPETEAVVKEKLTGLHKMWEVLEST
 TQTKAQRFLDANKAELFTQSCADLDKWLHGLESQIQSDDYGKDLTSVNILLK
 KQQMLENQMEVRKKEIEELQSQAQALSQEGKSTDEVDSKRLTVQTKFMELL
 EPLSERKHNLASKEIHQFNRDVEDEILWVGERMPLATSTDHGHNLQTVQLLI
 30 KKNQTLQKEIQGHQPRIDDIFERSQNIITDSSSLNAEAIQRLADLKQLWGLLIE
 ETEKRHRRLLEEAHKAQQYYFDAEAEAWMSEQELYMMSEEKAKDEQSAVS
 MLKKHQILEQAVEDYAETVHQLSKTSRALVADSHPESEISMRSKVDKLYAG
 LKDLAEERRGKLDERHRLFQLNREVDDLEQWIAEREVVAGSHELGDYEHV
 TMLQERFREFARDTGNIGQERVDTVNNMADELINSGHSDAATIAEWKDGLNE
 35 AWADLLELIDTRTQILAASYELHKFYHDAKEIFGRIQDKHKKLPEELGRDQNT
 VETLQRMHTTTFEHDIALGTQVRQLQEDAARLQAAYAGDKADDIQKRENEV
 LEAWKSLLDACEGRVRVLDVTGDKFRFFSMVRDLMLWMEDVIRQIEAQEKPR
 DVSSVELLMNNHQGIKAEIDARNDSTACIELGKSLLARKHYASEEIKEKLLQL
 TEKRKEMIDKWEDRWELRLILEVHQFSRDASVAEAWLLGQEPYLSREIGQ
 40 SVDEVEKLIKREHAEFEKSAATWDERFSALERLTTLELLEVRRQEEEEERKRRP
 PSPDPNTKVSEEAESQQWDTSKGDQVSQNGLPAEQGSPPVSYRSQTYQNYKN
 FNSRRTASDHSWSGM
 -COOH

45 Figure 70- Full-length Amino Acid Sequence (mSPNB2) (SEQ ID NO: 150)

NH₂-DDAAVETAEAEAKEPAEADITELCRDMFSKMATYLTGELTATSEDYKLLN
MNKLTSLKYLEMKDIINISRNKDLNQKYAGLQPYLDQINVIEEQVAALEQA
AYKLDAYSKKLEAKYKKLEKR
-COOH

5

Figure 71- Partial Amino Acid Sequence (BC020494(124)) (SEQ ID NO: 132)

NH₂-MSSSDEETLSERSCRSERSCRSERSYRSERSGSLSPCPPGDTLPWNLPLHE
QKKRKSQDSVLDPAERAVVRVADERDRVQKKTFTKWVNKHLMKVRKHINDL
YEDLRDGHNLISLLEVLSGIKLPREKGRMRFHRLQNVQIALDFLKQRQVKLVN
IRNDDITDGNPKLTGLIWTIILHFQISDIYISGESGDMSAKEKLLWTKV
5 YTGIKCTNFSSCWSDGKMFNALIHRYRPDLVDMERVQIQSNRENLEQAFEVAE
RLGVTRLLDAEDVDVPSPDEKSVITYVSSIYDAFPKVPEGGEGISATEVDSRW
QEYQSRVDSLIPWIKQHTILMSDKTFPQNPVELKALYNQYIHFKETEILAKERE
KGRIEELYKLEVVWIEFGRIKLPQGYHPNDVEEEWGKLIEMLEREKSRLPAVE
RLELLLQIANKIQNGALNCEEKLTAKNTLQADAAHLESGQPVCESDVIMYI
10 QECEGLIRQLQVDLQILRDENYYQLEELAFRVMRLQDELVTLRLECTNLYRKG
HFTSLELVPPSTLTTHLKAEP LTKATHSSSTSWFRKPMTRAELGPSAPLKMKA
ISDLCMNYCLWVEEMQMKLERA EWGNDLPSVELQLETQQHIHTSVEELGSSV
KEARLYEGKMSQNFHTSYAETLGKLETQYCKLKETSSFRMRHLQSLHKFVSR
ATAELIWLNEKEEEEELAYDWSNNSNISAKRNYFSELTMELEEKQDVFRSLQD
15 TAE LLSLENHPAKQTVEAYSAAVQSQLQWMKQLCLCVEQHVKENTAYFQFFS
DARELESFLRNLQDSIKRKYSCDHNTSLSRLEDLLQDSMDEKEQLIQSKSSVAS
LVGRSKTIVQLKPRSPDHVLKNTISVKAVCDYRQIEITICKNDECVLEDNSQRT
KWKVISPTGNEAMVPSVCFLIPPPNKDAIEMASRVEQSYQKVMALWHQLHV
NTKSLISWNYLRKDLDLVQTNWLEKLRSSAPGECHQIMKNLQAHYEDFLQDS
20 RDSVLFVADRLRLEEEVEACKARFQHLMKSMENEDKEETVAKMYISELKNI
RLRLEEYEQRVVKRIQSLASSRTDRDAWQDNALRIAEQEHTQEDLQQLRSDL
DAVSMKCD SFLHQSPSSSVPTLRSELNLLVEKMDHVYGLSTVYLNKLKTVD
VIVRSIQDAELLVKGYEIKLSQEEVVLADLSALEAHWSTLRHWSLSDVKDNS
VFSVLDEEIAKAKVVAEQMSRLTPERNLDLERYQEKGSQLQERWHRVIAQLEI
25 RQSELESIQEV LGDYRACHGTLIKWIEETTAQQEMMKPGQAEDSRVLSEQLSQ
QTALFAEIERNQTKLDQCQKFSQQYSTIVKDYELQLMTYKAFVESQOKSPGK
RRRMLSSSDAITQEFMDLRTRYTALVTLTQHVKYISDALRRLEEEEEKVVEEE
KQEHVEKV KELLGWVSTLARNTQGKATSSETKESTDIEKAILEQQVLSEELTT
KKEQVSEAIKASQIFLAKHGHKLSEKEKKQISEQLNALNKAYHDLCDGSANQ
30 LQQLSQSLAHQTEQKTLQKQNTCHQQLEDLCSWVGQAERALAGHQGR TT
QQDLSALQKNQSDLKDLQDDIQNRATSFATVVKDIEGFMEENQTKLSPRELTA
LREKLHQAKEQYEALQEETRVAQKELEEAVTSALQQETEKSKAAKELAENKK
KIDALLDWVTSVGSSGGQLLTNLPGMEQLSGASLEKGALD TTDGYMGVNQA
PEKLDKQCEMMKARHQELLSQQQNFILATQSAQAFLDQHGHNLTPEEQQML
35 QQKLGE LKEQYSTSLAQSEAE LKQVQTLQDELQKFLQDHKEFESWLERSEKE
LENMHKGGSSPETLP SLLKRQGSFSEDVISHKGDLRFVTISGQKVLDMENSFK
EGKEPSEIGNLVKDKLKDATERYTALHSKCTRLGSHLNMMLLGQYHQFQNSAD
SLQAWMQACEANVEKLLSDTAASDPGVLQEQLATTKQLQEELAEHQVPVEK
LQKVARDIMEIEGEPAPDHRHVQET TDSILSHFQSLSYSLAERSSLLQKAIAQS
40 QSVQDSLESLLQSIGEVEQNLEGKQVSSLSSGVIQEALATNMKLKQDIARQKS
SLEATREMVTRFMETADSTTA AVLQGKLAEVSQRFEQLCLQQQKESSLKKLL
PQAEMFEHL SGLQQFMENKSRMLASGNQPDQDITHFFQQIQELNLEMEDQQ
ENLDTLEHLVTELSSCGFALDLCQH QDRVQNLRKDFTELQKTVKEREKDASS
CQEQLDEF RKLVRTFQKWLKETEGSIPPTETSMSAKELEKQIEHLKSLDDWA
45 SKGTLVEEINYKGTSLENLIMEITAPDSQGKTGSILPSVGSSVGSVNGYHTCKD
LTEIQCDMSDVNLKYEKLGGLVHERQESLQAILNRMEEVHKEANSVLQWLES
KEEVLKSMDAMSSPTKTETVKAQAESNKAFLAELEQNSPKIQKVKEALAGLL
VTYPNSQEAENWKKIQEELNSRWERATEVTVARQRQLEESASHLACFQA AES
QLQPWLMEKELMMGVLGPLSIDPNMLNAQKQQVQFMLKEFEARRQQHEQL
50 NEAAQGILTGP GDVSLSTSQVQKELQSINQKWVELTDKLNRS SSQIDQAIVKST

QYQELLQDLSEKVRVAVGQRLSVQSAISTQPEAVKQQLEETSEIRSDLEQLDHE
VKEAQTLCDELSVLIGEYLYKDELKKRLETVALPLQGLEDLAADRINRLQAAL
ASTQQFQQMFDELRTWLDDKQSQQAKNCPISAKLERLQSQLQENEEFQKSLN
QHSGSYEVIVAEGESLLSVPPGEEKRTLQNLVELKNHWEELSKKTADRQSR
5 LKDCMQKAQKYQWHVEDLVPWIEDCKAKMSELRVTLDPVQLESSLLRSKA
MLNEVEKRRSLLEILNSAADILINSSEADEDGIRDEKAGINQNMDAVTEELQA
KTGSLEEMTQRLREFQESFKNIEKKVEGAKHQLEIFDALGSQACSNKNLEKLR
AQQEVQLALEPQVDYLRNFTQGLVEDAPDGSDASQLLHQAQEVAAQEFLEV
QRVNSGCVMMENKLEGIGQFHCRVREMFSQLADLDELDGMGAIGRDTDSL
10 QSQIEDVRLFLNKIHLVLDIEASEAECRHMLEEGLDGLLGLKRELEALNKQ
CGKLTERGKARQEQLTLGRVEDFYRKLKGLNDATTAAEEAEALQWVVG
EVEIINQQLADFKMFQKEQVDPLQMKLQQVNGLGQGLIQSAGKDCDVQGLE
HDMEEINARWNTLNKKVAQRIALQLEALLHCGKFQDALEPLLSWLADTEELI
ANQKPPSAEYKVVKAQIQEQKLLQRLDDRKATVDMQLQAEGGRIAQSAELA
15 DREKITGQLESLESRWTELLSKAAARQKQLEDILVLAKQFHETAEPISDFLSVT
EKLANSEPVGTQTAKIQQQIIRHKALEEDIENHATDVHQAVKIGQSLSSLTSPA
EQGVVSEKIDSLQARYSEIQDRCCRKAALLDQALSNAFLGEDEVEVLNWL
EVEDKLSSVFKDFKQDVLHRQHADHLALNEEIVNRKKNVDQAIKNGQALL
KQTTGEEVLLIQEKLDGIKTRYADITVTSSKALRTLEQARQLATKFQSTYEELT
20 GWLREVEEELATSGGQSPTGEQIPQFQQRQKELKKEVMEHRLVLDTVNEVSR
ALLELVWRAREGLDKLVSDANEQYKLVSDTIGQRVDEIDAAIQRSSQYEQ
ADAELAWVAETKRKLMAFGPIRLEQDQTTAQLQVQKAFSIDIIRHKDSMDL
SHRSEIFGTCGEEQKTVLQEKTESLIQQYEAISLLNSERYARLERAQVLNQFW
ETYEELSPWIEETRALIAQLPSAIDHEQLRQQQEEMRQLRESIAEHKPHIDKLL
25 KIGPQLKELNPEEGEMVEEKYQKAENMYAQIKEEVQRALALDEAVSQSTQI
TEFHDKIEPMLTLENLSSRLRMPPLPAEVDKIRECISDNKSATVELEKLQPSF
EALKRRGEELIGRSQGADKDLAAKEIQDKLDQMVFVWEDIKARAEEREIKFL
DVLELAEKFWYDMAALLTTIKDTQDIVHDLESPGIDPSIIKQQVEAAETIKEET
DGLHEELEFIRILGADLIFACGETEKPEVRKSIDEMNNAWENLNKTWKERLEK
30 LEDAMQAAVQYQDTLQAMFDWLDNTVIKLCMPPVGTDLNTVKDQLNEMK
EFKVEVYQQQIEMEKLNHQELMLKKATDETDRDIIREPLTELKHLWENLGE
KIAHRQHKLEGALLALGQFQHALEELMSWLTHTEELLDAQRPISGDPKVIEVE
LAKHHVLKNDVLAHQATVETVKNAGNELLESSAGDDASSLRSRLEAMNQC
WESVLQKTEEREQQLQSTLQQAQGFHSEIEDFLELTRMESQLSASKPTGGLP
35 ETAREQLDTHMELYSQKAKEETYNQLLDKGRLMLLSRDDSGSGSKTEQSV
LLEQKWHVVSMEERKSKLEEALNLATEFQNSLQEFINWLTLAEQSLNIASP
PSLILNTVLSQIEEHKVFANEVNAHRDQIIELDQTNQLKFLSQKQDVVLIK
LVSVQSRWEKVVQRSIERGRSLDDARKRAKQFHEAWKKLIDWLEDAESHLD
ELEISNDPDKIKLQLSKHKEFQKTLGGKQPVYDTTIRTGRALKEKTLLPEDTQ
40 KLDNFLGEVRDKWDTVCGKSVERQHKLEEALLFSGQFMDALQALVDWLYK
VEPQLAEDQPVHGDLVLMNMDAHKVFQKELGKRTGTQVQLKRSRGRELIE
NSRDDTTWVKGQLQELSTRWDTVCKLSVSKQSRLEQALKQAEVFRDTHVHML
LEWLSEAEQTLRFRGALPDDTEALQSLIDTHKEFMKKVEEKRVVNSAVAMG
EVILAVCHPDCITTIKHWITIIRARFEEVLTWAKQHQQRLETALSELVANAELLE
45 ELLAWIQWAETTLIQRDQEPQIDRVKALIAEHQTFMEEMTRKQPDVDRVT
KTYKRKNIEPTHAPFIEKSRSGGRKSLSQPTPPMPILSQSEAKNPRINQLSARW
QQVWLLALERQRKLNDALEELKEFANFDVWRKKYMRWMNHKKSR
VMDFFRRIDKDQDGKITRQEFIDGILASKFPTTKLEMTAVADIFDRDGDGYIDY
YEFVAALHPNKDAYRPTTDADKIEDEVTRQVAQCKCAKRFQVEQIGENKYRF
50 GDSQQLRLVRILRSTVMVRVGGGWMALDEFLVKNDCRARGRTNIELREKFI

LPEGASQGMTPFRSRGRRSKPSSRAASPTRSSSSASQSNHSCTSMPPSSPATPASG
TKVIPSSGSKLKRPTPTFHSSRTSLAGDTSNSSSPASTGAKTNRADPKKSASRP
GSRAGSRAGSRASSRRGSDASDFDLLETQSACSDTSESSAAGGQGNSRRGLN
KPSKIPTMSKKTTTASPRTPGPKR

5 -COOH

Figure 72- Full-length Amino Acid Sequence (MACF1) (SEQ ID NO: 151)

10

15

20

NH₂-MSSDSEMAIFGEAAPFLRKSERERIEAQNKPFDAKTSVFVVDPKESFVKA
TVQSREGGKVTAKTEAGATVTVKDDQVFPMPNPPKYDKIEDMAMMTHLHEPA
VLYNLKERYAAWMIYTYSGLFCVTVNPKWLPVYNAEVVTAYRGKKRQEAP
PHIFSISDNAYQFMLTDRENQSILITGESGAGKTVNTRKVIQYFATIAVTGEKKK
5 EEVTSQGMQGTLEDQIISANPLLEAFGNAKTVRNDNSSRFGKFIRIHFGTTGKL
ASADIETYLLEKSRVTFQLKAERSYHIFYQIMSNKKPDLEMLLITNPDYAF
VSQGEITVPSIDDEELMATDSAIEILGFTSDERVSIIYKLTGAVMHYGNMKFKQ
KQREEQAEPDGTEVADKAAYLQNLNSADLLKALCYPRVKVGNVYVTKGQTV
QQVYNAGALAKAVYDKMFLWMVTRINQQLDTKQPRQYFIGVLDIAGFEIFD
10 FNSLEQLCINFTNEKLQQFFNHMFVLEQEEYKKEGIEWTFIDFGMDLAACIE
LIEKPMGIFSILEEECMFPKATDTSFKNKLYEQHLGKSNNFQKPKPAKGKPEAH
FSLIHYAGTVDYNIAGWLDKNKDPLNETVVGLYQKSAMKTLALLFVGATGAE
AEAGGGKKGGKKGGSSFTVSALFRENLNKLMTNLRSTHHPFVRCIIPNETKT
PGAMEHELVLHQLRCNGVLEGIRICRKGFPRIYADFKQRYKVLNASAPEGO
15 FIDSKKASEKLLGSIDIDHTQYKFGHTKVFFKAGLLGLEEMRDEKLAQLITRT
QAMCRGFLARVEYQKMVERRESIFCIQYNVRAFMNVKHWPWMKLYFKIKPL
LKSAETEKEMANMKEEFKTEELAKTEAKRKELEEKMTLMQEKNDLQLO
VQAEADSLADAEERCDQLIKTKIQLEAKIKEVTERAEDEEEINAELTAKKRKL
EDECELKDDIDLELTLAKVEKEKHATENKVKNLTEEMAGLDETIAKLTKEK
20 KALQEAHQQTLDLQAEEDKVNTLTAKIKLEQQVDDLEGSLEQEKKIRMD
LERAKRKLEGLDLKLAQESAMDIENDKQQLDEKLKKKEFEMSGLSKIEDEQA
LGMQLQKKIKELQARIEEEEEIEAERASRAKAEKQRSLSRELEEISERLEEA
GGATSAQIEMNKKREAEFQKMRRDLEEATLQHEATAATLRKKHADSVAEELGE
QIDNLQRVKQKLEKEKSEMMEIDDLASNMETVSKAKGNLEKMCRALEDQL
25 SEIKTKEEEQQLINDLTAQRARLQTESGEYSRQLDEKDTLVSQLSRGKQAF
QQIEELKRQLEEEIKAKSALAHALQSSRHDCDLLREQYEEEQEAKAELQRAM
SKANSEVAQWRTKYETDAIQRTTEELAAKKLAQRLQDAEEHVEAVNAKCAS
LEKTKQRLQNEVEDLMIDVERTNAACAALDKKQRNFDKILAEWKQKCEETH
AELEASQKESRSLSTELFKIKNAYEESLDQLETLKRENKNLQQEISDLTEQIAE
30 GKGRIHELEKIKKQVEQEKSELQAALAEAEASLEHEEGKILRIQLELNQVKSEV
DRKIAEKDEEIDQMKRNHIRIVESMQSTLDAEIRSRNDAILRKKKMEGDLNEM
EIQLNHANRMAAEALRNYRNTQAILKDTQLHLDDALRSQEDLKEQLAMVER
RANLLQAEIEELRATLEQTERTSRKIAEQELLDASERVQLLHTQNTSLINTKKKL
ETDISIQGEMEDIIEARNAEEKAKKAITDAAMMAEELKKEQDTSALHERM
35 KKNLEQTVKDLQHRLDEAEQLALKGGKKQIQKLEARVRELEGEVESEQKRN
VEAVKGLRKHERKVKELTYQTEEDRKNILRLQDLVDKLQAKVKSYKRQAE
AEEQSNVNLSKFRRIQHELEAEERADIAESQVNKL RVKSREVHTKIISEE
-COOH

40 Figure 73- Full-length Amino Acid Sequence (MYH1) (SEQ ID NO: 152)

NH₂-MPGTALSPLLLLLLLSWASRNEAAPDQDEIDCLPGLAKQPSFRQYSGYLR
ASDSKHFHYWFVESQNDPKNSPVVLWLNGGPGCSSLDGLLTEHGPFLIQPDG
VTLEYNPYAWNLIANVLYIESPAGVGFSYSDDKMYVTNDTEVAENNYEALKD
FFRLFPEYKDNKFLTGESYAGIYIPTLAVLVMQDPSMNLQGLAVGNGLASYE
5 QNDNSLVYFAYYHGLLGNRLWTSLQTHCCAQNKCIFYDNKDPECVNNLLEV
SRIVGKSGLNIYNLYAPCAGGVPGRHRYEDTLVVQDFGNIFTRLPLKRRFPEAL
MRSGDKVRLDPPCTNTTAPSNYLNNPYVRKALHIPESLPRWDMCNFLVNLQY
RRLYQSMNSQYLKLLSSQKYQILLYNGDVDMACNFMGDEWFVDSLQKME
VQRRPWLVDYGESGEQVAGFVKECSHITFLTIKGAGHMPPTDKPRAAFTMFS
10 RFLNKEPY
-COOH

Figure 74- Full-length Amino Acid Sequence (mPPGB) (SEQ ID NO: 153)

NH₂-MAAPRPPPAISVSVSAPAFYAPQKKFAPVVAPKPKVNPFRPGDSEPPVAAG
AQRAQMGRVGEIPPPPEDFPLPPPPLIGEGDDSEGALGGAFPPPPPPMIEEPFPP
APLEEDIFPSPPPPLEEEGGPEAPTQLPPQPREKVCIDLEIDSLSSLLDDMTKND
PFKARVSSGYVPPPVA TPFPKPKSTKPAPGGTAPLPPWKTPSSSQPPPQPAKPQ
5 VQLHVQPQAKPHVQPQPVSANTQPRGPLSQAPTPAPKFAPVAPKFTPVVSKF
SPGAPSGPGPQPNQKMPDPDAPSSVSTGSPQPPSFTYAQQKEKPLVQEKQHPQ
PPPAQNQNQVRSPGGPGPLTLKEVEELEQLTQQLMQDMEHPQRQSVAVNESC
GKCNQPLARAQPAVRALGQLFHITCFTCHQCQQQLQGQQFYSLGAPYCEGC
YTDLTLEKCNCTCGQPITDRMLRATGKAYHPQCFTCVVCACPLEGTSFIVDQAN
10 QPHCVDPYHKQYAPRCVCSEPIMPEPGRDETVRVVALDKNFHMKCYKCEDC
GKPLSIEADDNGCFPLDGHVLCRKCHSARAQT
-COOH

Figure 75- Full-length Amino Acid Sequence (mZYX) (SEQ ID NO: 154)

15

NH₂-MFADLDYDIEEDKLGIP TVPGK VTLQKDAQN LIGISIGGGAQYCPCLYIV
QVFDNTPAALDGTVAAGDEITGVNGKSIKGKTKVEVAKMIQEVKGEVTIHYN
KLQADPKQGMSLDIVLKKVKHRLVENMSSGTADALGLSRAILCNDGLVKRLE
ELERTAELYKGMTEHTKNLLRAFYELSQTHRAFGDVFSVIGVREPQPAASEAF
5 VKFADAHRSIEKFGIRLLKTIKPMLTDLNTYLNKAIPDTRLTIKKYLDVKFEYL
SYCLKVKEMDDEEYSCIALGEPLYRVSTGNYEYRLILRCRQEARARFSQMRK
DVLEKMELLDQKHVQDIVFQLQRFVSTMSKYYNDCYAVLQDADVFPIDV
AHTTLAYGPNQGSFTDGEEDEEEEDGAAREVSKDACGATGPTDKGGSWCD
S
10 -COOH

Figure 76- Full-length Amino Acid Sequence (mPRKCABP) (SEQ ID NO: 155)

NH₂-MGDVKLFASSHMSKTSHSVDP SKVSSMPLTEAPAFILPPRNLCVKEGATA
 KFEGRVRGYPEPQVTWHRKGQAITNGGRFLLDCGVRGTFSLVIH TVREEDKG
 KYTCEASNGSGARQVTVELTVEGNSMKKRDPVLSKASGFPGETRPSIWGEC
 PPKFATKLGRAVVKEGQMGRFSCKITGRPPPQVTWLKGNVPLQPSARVSMSE
 5 KNGMQILEIRGVTRDDLGVYTCMVVNGSGKASMSAELSIPGLDNAARLAVR
 GTKAPSPDIRKEVTNGVSKDPETVAESKNCPSPQRS GSSARATNSHLKSPQEPK
 PKLCEDAPRKVPQSSILQKSTSTITLQALKVQPEARVPAIGSFSPGEDRKSLAAP
 QQATLPTRQSSLGGSVGNKFVTGNIPRESQRESTFPRFESQPQSQEVT EGQTVK
 FICEVSGIPKPDVGWFLEGIPVRRREGITEVYEDGVSHHLCLLRARTRDSGRYS
 10 CTASNSLGQVSCSWSLVDRPNLAQTAPSFSSVLKDSVVIEGQDFVLRCSVQG
 TPAPRVTWLLNGQPIQFAHSICEAGVAELHIQDALPEDRGTYTCLAENAMGQV
 SCSATVTVQEKKGEGEREHRLSPARSKPIAPIFLQGLSDLKVM DGSQVTMTVQ
 VSGNPPPEVIWLHDGNEIQESEDHFHEQKGGWHS LCIQEVFPEDTGTYTCEAW
 NSAGEVRTRAVLTVQEPHDGTQPWFISKPRSVTATLGQSVLISCAIAGDPFPTV
 15 HWLRDGRALSKDSGHFELLQNEDEVFTLV LKNVQPWHAGQYEILLKNRVGEC
 SCQVSLMLHNSPSRAPPRGREPASCEGLCGGGGVGAHGDGDRHGT LRPCWP
 ARGQGWP EEEDGEDVRGLLKRRVETRLHTEEAIRQQE VQGQDFRDLLGKKV
 STKTVSEDDLKDIPAEQMDFRANLQRQVKPKTISEEERKVHSPQQVD FRSVLA
 KKGTPKTPVPEKAPPKAATPDFRSVLGGKKKSPSENGGNSAEVLNVKAGESP
 20 TPAGDAQAIGALKPVGNAKPAETPKPIGNAKPTETLKPVGNTKPAETLKPIAN
 AQPSGSLKPVTNAQPAEPQKPVGNAKSAETSKPAGKEEVKEVKNDVNCKKG
 QVGATGNEKRPE SQGSAPVFKEKLQDVHVAEGEKL LLQCQVISDPPATVTWSL
 NGKTLKTTKFIVLAQEGSRFSVSIEKALPEDRGLYKCVAKNSAGQAECSCQVT
 VDDAQTSENTKAPEMKSRRPKSSLPPVLGTESDATVKKK PAKTPTKAAMPP
 25 QIIQFPEDQKVRAGEPVELFGKVAGTQPITCKWMKFRKQIQESEHIKVENGES
 GSKLTILAA RQEHCGCYTLVVENKLGSRQAQVNLT VVDKPDPPAGTPCASDIR
 SSSLTLSWYGSSYDGGSAVQSYNVEIWDTE DKVWKELATCRSTS FNVQDLLP
 DREYKFRVRANVYGTSEPSQESELTA VGEKPEEPKDEVEVSDDDEKEPEVDY
 RTVTVNTEQKVSDVYDIEERL GSGKFGQVFRLVEKKTGKIWAGKFFKAYS AK
 30 EKDNI RQEISIMNCLHHPKLVQCVD AFEEKANIVMVLE
 -COOH

Figure 77- Full-length Amino Acid Sequence (mMYLK) (SEQ ID NO: 156)

5'-GACCTGAAGGCCACGCTGAACTCTGGCCCAGGCGCCCAGCAGAAGGAG
ATCGGAGAGTTGAAGGCCCTGGTAGAGGGCATCAAGATGGAGCACCAGCT
GGAGTTAGGTAACTGTCAGGCCAAGCACGACTTGGAGACGGCCATGCATG
GGAAGGAGAAGGAGGGCCTGCGGCAGAAGCTGCAAGAGGTCCAGGAGGA
5 GCTGGCCGGGCTGCAGCAGCACTGGAGGGAGCAGCTGGAGGAGCAGGCC
AGCCAGCATCGGCTGGAGCTCCAAGAAGCCCAGGACCAATGTCGCGACGC
CCAGCTGCGCGCGCAGGAGCTAGAGGGACTGGATGTGGAGTACCGTGGCC
AGGCTCAAGCCATCGAGTTCCTCAAAGAGCAGATCTCACTGGCTGAAAAG
AAGATGCTAGATTACGAGATGCTGCAGAGGGCCGAAGCCCAGAGCAGGCA
10 GGAGGCCGAGCGGCTGCGGGAAAAGCTTCTGGTGGCTGAGAATAGACTCC
AGGCCGCCGAGTCCCTGTGCTCAGCCCAGCACAGCCATGTGATCGAATCCA
GTGACCTTTCTGAGGAGACAATTCGGATGAAGGAGACTGTAGAGGGCCTG
CAGGACAAGCTGAACAAGAGGGGACAAAGAGGTGACAGCCTTGACATCCC
AGATGGACATGCTCAGGGCCCAAGTAAGTGCTCTAGAAAACAAGTGCAAA
15 TCAGGAGAGAAGAAGATAGATTCTCTCCTGAAGGAGAAGAGGCGCCTAGA
GGCAGAGCTGGAGGCTGTGTCTCGGAAGACCCACGATGCCTCCGGCCAGC
TGGTCCACATCAGCCAGGAGTTGCTGCGGAAAGAGAGGAGTCTGAACGAG
CTGAGGGGTGTTGCTGTTAGAAGCCAATCGCCACTCCCCAGGGCCCCGAGAG
AGACCTGAGCCGTGAAGTACACAAAGCTGAATGGCGGATAAAGGAACAGA
20 AACTGAAGGATGACATCCGGGGCCTGCGTGAGAAGCTGACCGGGCTGGAC
AAGGAGAAGTCCCTATCAGAGCAGAGACGCTACTCCCTCATTGACCCAGCT
TCACCACCCGAGCTGCTGAAACTGCAGCATCAGTTGGTGAGCACGGAAGA
C-3'

25 Figure 78- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 120 (SEQ ID NO: 157) (1098 nucleotides in total)

5'-GAGAAAGGAATCAAACCTGCTGCAGGCACAGAAGCTGGTGCAGTATTTG
CGGGAGTGTGAGGATGTAATGGACTGGATCAATGACAAGGAAGCAATTGT
GACTTCTGAGGAGCTGGGCCAGGACCTGGAGCATGTAGAGGTGCTACAGA
AGAAGTTTGAAGAGTTTCAGACTGATCTGGCTGCTCATGAAGAAAGAGTT
5 AATGAAGTGAGCCAGTTTGCTGCCAAACTCATCCAGGAGCAGCACCCGGA
AGAGGAGCTGATCAAGACCAAGCAGGATGAGGTGAATGCAGCATGGCAGC
GACTGAAAGGCCTGGCTCTTCAAAGGCAGGGCAAGCTGTTCCGGTGCTGCT
GAGGTCCAGCGCTTTAACAGGGATGTAGATGAGACCATTGGTTGGATTAAG
GAGAAAGAGCAGTTAATGGCCTCTGATGACTTCGGCAGAGACTTAGCAAG
10 TGTTCAAGCTCTGCTTCGAAAGCATGAGGGTCTGGAGAGAGATCTTGCTGC
TCTAGAGGACAAGGTGAAAGCCCTGTGTGCTGAGGCTGACCGCCTGCAAC
AGTCACACCCTCTGAGTGCCAGCCAGATCCAGGGGAAGCGA-3'

Figure 79- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
15 SEQ ID NO: 123 (SEQ ID NO: 158) (591 nucleotides in total)

5'-GACGATGCCGCCGTGGAGACAGCTGAGGAAGCAAAGGAGCCTGCTGAA
GCTGACATCACTGAGCTCTGCCGGGACATGTTCTCCAAAATGGCCACTTAC
CTGACTGGGGAACTGACGGCCACCAGTGAAGACTATAAGCTCCTGGAAAA
TATGAATAAACTCACCAGCTTGAAGTATCTTGAAATGAAAGATATTGCTATA
5 AACATTAGTAGGAACTTAAAGGACTTAAACCAGAAATATGCTGGACTGCAG
CCTTATCTGGATCAGATCAATGTCATTGAAGAGCAGGTAGCAGCTCTTGAG
CAGGCAGCTTACAAGTTGGATGCATATTCAAAAAAACTGGAAGCCAAGTAC
AAGAAGCTGGAGAAGCGATGA-3'

10 Figure 80- Partial cDNA Nucleotide Sequence Encoding the Amino Acid Sequence of
SEQ ID NO: 132 (SEQ ID NO: 159) (375 nucleotides in total)

15 BOS2_431019.1